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MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.

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A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.

EDITED BY

PROFESSOR G. F. STOUT,

WITH THE CO-OPERATION OF PROFESSOR E. B. TITCHENER, AMERICAN EDITORIAL REPRESENTATIVE, AND OF PROFESSOR WARD, PROFESSOR PRINGLE-PATTISON, DAVID MORRISON, M.A., AND OTHER MEMBERS OF AN ADVISORY COMMITTEE.

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PSYCHOLOGY AND PHILOSOPHY

I.—RATIONALISM AND EMPIRICISM.

By George Trumbull Ladd.

The habit of calling names is in general inclined to become unseemly, but in philosophical discussion it is peculiarly confusing and mischievous. Scarcely less so is another performance which is, however, commonly supposed to be a proof of scholarship and of acquaintance with the history of reflective thinking. I refer to the current practice of assigning different writers on philosophical subjects to so-called "schools of philosophy," or to some one of the great masters as his pupils or followers. Thus in wordy battles the rank and file of thinkers are flattered with the name of some field-marshal prominent before the public at the time. No doubt philosophers, whether of the chair or of the popular forum, do really learn something from one another; indeed, that, under the stress of ambition for a reputation for originality, they learn so little and come to so little agreement is a misfortune rather than a source of pride. No doubt, also, the great majority of would-be philosophers, as well as the unpretending multitude, must be dependent on the good few for their inspiration, their insight, and perhaps in large measure for their opinions. Otherwise there could be no continuity or real development to the reflective thinking of the race, and the many could never receive the benefits arising from the special talents or the rare genius of the few.

Much of the same objection applies to the greater proportion of the teaching of philosophy and of the history of philosophy in the college and university curricula of to-day. It inevitably results in a pretence of "knowledge about" rather than a genuine "knowledge of". An experience of

more than thirty years with hundreds of pupils has convinced the writer that dictating lecture-notes or giving out lessons in text-books, which attempt to summarise the opinions of the philosophical masterpieces and to classify their authors into schools, is not only a vain, but is a positively misleading, way of teaching the history of philosophy. There is only one way to know what a philosopher has thought, and that is the way of the unprejudiced and thoughtful study of what that same philosopher has said,—and this, of course, as much as possible in the light of its sources in preceding thought and in its own historical environment. All this is as true of the second-rate and the third-rate thinkers as it is true of the very few whom their posterity has agreed to call of the first rank.

There is probably no other subject of controversy about which, and no other word under the cover of which, there has been more of this deplorable confusion and consequent inner bitterness and outward contempt than the subjects covered by the word "rationalism". So worn-out and antiquated does all this seem to the student of history, as it was illustrated and indeed made lurid by the theological writings of the seventeenth and eighteenth centuries, that it could scarcely make valid claim to occupy our attention at the present time, were it not for the fact that Pragmatism has just recently renewed the confusion and stimulated an equally vain and fallacious contention under a seemingly different but essentially identical form. In those centuries Rationalism was opposed to orthodox theology; it was even considered antithetic to all religion,—in the one case, as naturalism, in the other, as either out-and-out materialism or a materialistic pantheism. It was then identified rather than contrasted with a certain form of empiricism, out of which, in fact, it sprang. The experience of man with the world of things, as this world was becoming known to modern science, was thought to contradict at least some of the dogmatic beliefs of the Christian in his use of the Scriptures or as doubtfully embodied in one or more of the creeds of Christendom. Thus a bitter controversy arose between rationalised empiricism and entrenched theological dogmatism. Singularly enough, the now current attacks on so-called rationalism seem, too often, to take the form of an unrationalised and emotional and rather dogmatic empiricism. What philosophy has been accustomed to regard as the most clearly established conclusions of the world's reflective thinking, on a basis of experience, is now assailed in the name of experience.

Strictly speaking, the words rationalism and rationalistic are properly used in philosophical terminology only as applicable to a certain *method* of exploring and ascertaining truth. Whenever they are used as applicable to the *content* of truth supposed to be thus ascertained, they are either misused or should be understood with a caution. In violation of this caution, for example, Pragmatism borrows the words, with all the opprobrium attaching to them in certain quarters, from the theological controversies of one and two generations ago, and in the name of empiricism holds up to ridicule and scorn many of the tenets of philosophy which were thought to be established on an empirical basis against the reigning dogmatism of that distant time. But rationalism is no more antithetic to empiricism than it is to idealism, or to realism, or to supernaturalism, or even to pragmatism. One might seem more justified in opposing it to scepticism; although it has almost invariably been identified with the most dangerous forms of scepticism when it has attempted to apply its method in a too unrestricted way to the problems of morals and religion. But on the one hand, one can neither theologise nor philosophise without some scepticism; and on the other hand, too much scepticism undermines all the authority and destroys all the work of reason, whether it be within the field of philosophy or theology, or even of the positive sciences.

Suppose, again, that we oppose rationalism to dogmatism; and, indeed, dogmatism is its most consistent and avowed opponent. Still scepticism, empiricism, liberalism, etc., may easily be just as little rational, just as truly dogmatic, and even just as stupidly irrational, as the most pronounced dogmatism in theology can be. But the perfectly indisputable claim, when fairly and generously interpreted in the light of a scientific psychology, that reason is man's only organon of knowledge in the form of scientific and philosophical truth, affords no guaranty whatever for the establishment of any particular truths as advocated by any individual group of so-called "scientists," or school of philosophers. Neither does the organon itself afford a method perfectly fixed in all its details and incapable of improvement through all time. It is not necessary to espouse the Hegelian dialectic in order to validate the confession that human reason itself is undergoing a process of development. If we must, in a sort of unholy zeal to combat certain errors masquerading in the name of rationalism, make distinctions of an opprobrious sort in rationalistic method, perhaps there is nothing better than that of a German theologian, himself an avowed rationa-

list of the old school, some seventy-five years ago. "There are now," said this German professor to a young American of inquiring mind, "three kinds of theologians at Halle—the Rationalists, the Irrationalists, and the Hurrah-tionalists." But what opponent of Rationalism, either then or now, would willingly be classed with either of the two last named?

That Rationalism is a method, indispensable for the ascertainment of truth in every sphere of human belief and knowledge, and that the verbal advocacy as well as the verbal rejection of it, the employment of it in attack or in defence of any particular system of opinions—scientific, philosophical, or religious,—is no mere squabble over the meaning of a word but a significant fact of history, might be demonstrated at any required length. Indeed, as I have already indicated, it would scarcely be worth while to call attention to the subject had not certain candidates for popular favour as affording new and easy solutions of the world-old and world-wide problems of reflective thinking, instead of showing a courteous manner toward other thinkers and a sincere willingness to place themselves upon a sound rational basis, revived the former confusion of thought and the unseemly and unprofitable practice of calling names in philosophical discussion.

It is not my purpose, however, to write an essay in the history of philosophy or of theological controversy. Reference to two or three significant facts must suffice. When Wegschneider, for example, "an acknowledged and highly respected authority on the systematic theology of the Rationalists," states its positions in terms of its doctrine of method, he says things which may need some modification or further explanation, but which can not be substantially controverted or denied. "We must," says this authority, "follow strenuously the norm of reason rightly applied, as of the highest faculty of the mind. . . . As to that which is said to be 'above reason,' the truth of which can by no means be understood, there is no possible way open to the human mind to demonstrate or affirm it." But when the same writer asserts: "The persuasion concerning the supernatural and miraculous, and at the same time immediate revelation of God, can not be reconciled with the idea of God eternal, always consistent with himself, omnipotent, omniscient, and most wise," he makes a statement which must be tested by his own method and which, as coming from an "authority" is no more necessarily true than any dogma one might choose from the most high-and-dry old-fashioned orthodoxy.

At the other end of the line, it is a curious fact that Lord Bacon spoke with contempt of the Rationalists because,

"like the spiders, they spin all out of their own bowels". Yet he proceeded at once to ask for "a philosopher who, like a bee, hath a middle faculty [*sic*], gathering from abroad, but digesting that which is gathered by its own virtue". What name shall we give to this "middle faculty"? Is it, as faculty, apart from reason, out of reason, or one form, or element, or manner of the functioning, of reason? The sensitiveness of the earlier opponents of Rationalism to being charged with a complete opposition to the use of the rationalistic method is almost ludicrously illustrated by the following quotation from a champion of orthodoxy: "Are those enthusiasts who profess to follow reason? Yes, undoubtedly, if by reason they mean only conceits. Therefore such persons are now commonly called *Reasonists* or *Rationalists* to distinguish them from true reasoners or rational inquirers." How familiar this sounds in the ears of one accustomed to the querulous tones of some of the present-day opponents of so-called Rationalism.

Since the progress of modern science and modern philosophy has modified or abolished the conceptions of nature and the supernatural, reason and revelation, creation and evolution, God personal and God immanent in the World of things and souls, as pairs the members of which are wholly antithetic and reciprocally exclusive, the old bitter and often indecent controversy between theological orthodoxy and so-called Rationalism has in most quarters largely passed away. It seems a pity to revive its confusion and its temptation to bitterness in the very field from which, above all others, it should be most zealously excluded—the field of systematic philosophy. Here, indeed, if nowhere else, the rationalistic method is imperative, is the only method available, not to say fruitful of results.

Most of the more intelligent opposition to the use of the rationalistic method in philosophy has arisen from a false psychology of cognition and an imperfect epistemology or theory of knowledge. This statement, too, admits of being verified by a resort to history. Rationalists and anti-rationalists alike virtually rely on reason as the final court of appeal in the validating of knowledge and opinion; albeit each overemphasises some one of the varied forms of its functioning to the depreciation or exclusion of the others, and is more intent upon securing ready and uncritical acceptance of the dogmas it is proclaiming *in the name of reason* than of giving itself, or securing from others, a patient and unprejudiced examination of *the particular reasons* on which these dogmas are assumed to be well founded. On the one hand, some of

the older Rationalists would have all truth, including the most mystical of alleged religious truths, tested by a process of induction from facts of general verification as facts. Among such sources of truth these reasoners were loth to admit facts of religious faith or moral ideals or spiritual intuitions. With them the world could be *rationally* interpreted only as a mechanical system; and for this knowledge the highest authority is sense-perception *rationalised* by logical processes. Others of the same party-name would regard reason as an organon of truth in some sort distinct from sense-perception and of higher authority. But a more haughty form of Rationalism claimed for reason the title to a faculty quite above the understanding (or, as in Coleridge's case, seemingly opposed to understanding), a place or store-house of the categories, or "elementary concepts," or "fundamental notions," from which in a demonstrative way the ultimate nature of reality might be deduced.

Now this last form of Rationalism, when its method is applied to religious truth, is very closely allied to Mysticism, one of the chief opponents of the older forms of Rationalism. The ground of this intimacy between the two is not difficult to discover. For Mysticism makes large use of the plain man's insights under the influence of emotion and the "will to believe"; and this is what modern Pragmatism is fain to do. So far as method is concerned, however, theological mysticism was, and Pragmatism is, rationalistic in a one-sided and imperfect way. But the most awkward and thoroughly culpable Rationalists of all the thinkers of the seventeenth and eighteenth centuries were those very theological dogmatists who were the bitterest opponents of the theological liberals of the same day. They made use of rationalistic methods in all their most restricted and inconsequential forms, no less than three times over—and often many more. For, in the first place, only by use of reason could they establish proofs on which to repose faith in the Scriptures, so as to find in these Scriptures an infallible source of truth, whether such truth seemed reasonable to other minds or not. In the second place, only by further use of reason could they tell in any particular case what these Scriptures meant to say. In the third place, only by much more intricate and doubtful use of rationalistic methods could these same reasoners develop from the Scriptures a system of theology which, according to their claim, must be received as articles of the Christian faith. But we shall subsequently see that this is almost precisely what the modern opponent is doing in its somewhat too rash and vituperative attack on so-called Rationalism.

Now all this way of regarding the nature of the reasoning faculty in man is psychologically false, and the controversy of which it is productive can never advance the cause of philosophical truth. Reason, whether regarded as applied to phenomena by science according to its special technique, or as the process by which we gain knowledge or opinion in matters of ethical, philosophical and religious truth, is no single or simple faculty. It is a process, complex and co-operative of all the so-called faculties, in every act of its functioning and as applied to every kind of truth. Sense, imagination, memory, ratiocination or relating activity (never more than half- and scarcely ever so much as half-conscious and intentional), instinctive impulses, rational insight or intuition, vague and more pronounced emotions, partly stimulating, partly regulative, formal compliance with the categories, or general and racial principles of human cognition,—all these and yet other elementary forms of functioning can be analysed out of the simplest exercise of reason in its search for truth. None of them is unimportant; none of them is ever dispensable.

As understood in this vague and complicated but psychologically true way, it is at once evident that reason is man's *only* organon for the discovery and explication of scientific or philosophical truth. Indeed, we do not speak intelligently of it when we treat its past services in every form of truth-seeking with contempt; nor do we speak piously of it when we set its functioning in antithesis to inspiration and its deliverances touching matters of religious faith in antagonism to revelation. But the depths of misapprehension would seem to be reached when we begin to decry Rationalism in systematic philosophy as the antithesis of a reasonable Empiricism.

Empiricism that has not been subjected to the testing and elaborating activity of reason furnishes no truth at all. An unrationalised empiricism is not philosophy, is not science, is not ordinary knowledge. Indeed, such a mental attitude is inconceivable as a cognitive affair. The speculative insights of Neo-Platonism, the *intellectuelle Anschauung* of Schelling, the mysticism of PISTIS SOPHIA, and the vagaries of Christian Science, can no more find entrance to the self-consciousness of the one who experiences them, than can the propositions of the Euclidean geometry or the generalisations of physics and chemistry, without clothing themselves in rational forms. Their truthfulness, if by this we mean any measure or manner of conformity to reality, must somehow be rationalised, must be made acceptable to the common reason of mankind.

The same thing is an essential condition of the communication and propagation of every species of truth. It must be subjected to the processes of reason, must take on rational form, in order to be statable or communicable. But especially unseemly and even ludicrous is it to approach the discussion of controverted problems in philosophy with a denunciation of Rationalism. If any one proposes such discussion with me and begins it by way of calling me a Rationalist, what can I say better than, "You're another"? otherwise, how can we come together on common terms, not to say, meet on the same levels? To discuss this *is* to appeal to reason, to a reason that is common to all those who take part in the discussion. All claims to the content of truth—call this content realism or idealism, scepticism or dogmatism, orthodoxy or infidelity, empiricism, rationalism, or even pragmatism—all must appear before the same court, all must abide by the verdict of this same court. But this court is always sitting, never ready rashly to reverse its decisions, ever ready to receive new evidence in science, new views in philosophy, "new light to break forth from the Word of God".

No doubt, a large part of those impressions and activities, in the appreciation, influence, and control of which life essentially consists, do not come by the way of logical processes, and are exceedingly difficult or even impossible of statement in logical formulas. Much of what we experience transcends the comprehension of our own reasons; the sources and elements of much of this experience rarely or never rise above the threshold of consciousness. But when I discover, and also when I state, this important truth, I am rationalising *some* of the data of my complex experience in order to make up a more complete and satisfactory account of my experience *as a whole.* Doubtless, also, in social life and in the spheres of morals, art and religion, a larger allowance must be made for the play of unrecognised and unreasoned emotion, the envisagement of intuition, the wish or more definite intent to have reality construed in a certain way, somewhat too regardless of scientific proof as to what its construction actually is. And the benefits of a certain supremacy of so-called practical over more definitely theoretical interests, within these spheres of human life and conduct, may properly also be recognised. We may find ourselves justified by all this in the belief—or even, as I am quite ready on grounds of reason to maintain, in the knowledge—that it is not by scientific induction alone, but also by artistic insight, moral adjustment, and religious faith, we know what the World really is. But all this, and much more of the same

kind, does not in the least degree warrant the opposition between Rationalism and Empiricism, on which those pragmatistically inclined so much insist, and of which they are so very proud. For not one of these statements can be verified, expressed, or communicated, otherwise than by the rationalistic method and with confidence in the functioning of reason as the organon of truth. The war-whoop with which this new form of empiricism greets the ears of the rationalist can be interpreted only as a challenge from some other rationalist to come half-way and meet him on common ground. On this common ground, not Bacon's "middle faculty" but the full-orbed rational nature of man as it rises by its experience of its own failures and successes toward the likeness of Universal Reason, will decide the battle and award the prizes of victory.

The inconsequential character of the attempt to set up a principled opposition between Empiricism and Rationalism as systems of philosophy is made conspicuous the moment we attain correct notions as to the nature and aims of systematic philosophy. What philosophy expressly tries to do is just this—to bring about some unity within and over the varied fields of experience. As given or achieved at first-hand, all our experiences are individual, concrete, not coming under the category of truth in the sense of co-respondent to, or representative of, either ourselves or other selves or things. But this is not knowledge; indeed, it is not experience in the more appropriate meaning of the term. Whether we accept any conceivable theory of so-called innate ideas or categories, or deny all such theories, in either case the concrete, individual items, the elements, of cognition must be rationalised before genuine cognition can take place. The rationalising process may have been done for us by our ancestors or by nature, or it may have been done by us in the forgotten ways and times of infancy, but in any case, without the functioning of reason no knowledge comes to man. As by the growth of reason and the succession of its functions as receiver and achiever of truth, the world of ordinary and so-called practical knowledge becomes unified, so is it in still higher degree with the functioning of reason in the development of the positive sciences. This unifying work of reason culminates in the attempt to form some at least partially verifiable ideal of the World as a whole. Such an attempt we call philosophy. It can never be anything more than a well-selected, well-defined, and well-arranged system of opinions which shall interpret Reality in terms of human ideas. The method of systematic philosophy, I repeat, is therefore essentially rationalistic, and

its conclusion is necessarily some form of an Ideal. To oppose Empiricism, as respects its method, to Rationalism, or as respects its conclusions to Idealism, is entirely to mistake the nature and aim of systematic philosophy. But this is what Pragmatism persistently does.

Let us for the moment, in part at least, assume the correctness of the conception of traditional Rationalism as to the "stuff" or material out of which has been constructed the man of straw that is so vigorously attacked by the modern Empiricism. Rationalism consists of certain principles, or generalisations concerning being and knowledge, which are thought by those who advocate their truthfulness to embody the experience of great numbers, or of the entire race. But these principles are, as a matter of necessity, arrived at by use—logical or inconsequential, convincing or fanciful—of the rationalistic method only as applied to the facts of experience. They are therefore just as truly, if not as self-consciously and avowedly, empirical, in the meaning that they have their roots somewhere in some kind of experience, as the baldest kind of self-conscious and avowed empiricism can possibly be. Indeed, just as there is only one method of ascertaining the truths of science and philosophy, and this is the patient and skilful use of reason, so there is only one source of these same truths, and that is the experience of the same rational being whose reason furnishes the method.

Moreover, as has already been indicated, this experience is never given at first hand, so to say, in the form of a knowledge of laws, general forms and relations, or universally applicable principles. It is always, also of a necessity which is born of the very unalterable nature of things and of minds, some one's individual, concrete experience, with a definite when and where, and given or achieved in some one specific form. This is as true of the intellectual intuition of the Absolute, if such a fact of any one's experience is admitted ever to have taken place, as it is of my sense-perception of yonder tree or fixed star. But, on the other hand, facts of moral intuition, facts of artistic appreciation, facts of religious inspiration, facts of philosophical generalisation, facts of metaphysical belief, however vague and tenuous, have as worthy claims to form the empirical basis of man's science and philosophy as any class of facts can possibly have. Indeed, the general, if not universal prevalence and persistence of some of these facts makes them particularly noteworthy for submission to the process of rationalising in the interests of science and philosophy as well as of the improvement of the practical life.

We may go much farther than this in our exposu re of the mistaken claims of the new Empiricism to represent the welfare of man on either the theoretical or the practical side, as against a barren and worn-out Rationalism.

Among all the facts of human experience there are none more important and instructive than those derived from a study of human history; and among these facts, those displayed by the development of man's reflective thinking are by no means the least important and instructive. Perhaps it is not too much to say that of all classes of generalisations in the fields of human knowledge and opinion, these have the most profound and extended empirical basis. For example, the progress of centuries of scientific investigation and of reflective thinking has evolved the conception of a Universe which has some sort of an ideal unity, a oneness of forces and laws underlying an enormous variety of individual and specific forms. And when we add to the facts from which the physico-chemical sciences make their generalisations, those other facts to which the students of ethics, æsthetics, and religion, are wont to make their appeal, we think ourselves warranted in cherishing, as rational, the belief that this same Universe is the source and embodiment of man's ethical, æsthetical and religious ideals. This conception of the World, and of Reason as immanent in the World, and of man's reason as the organon of Divine Reason, is the grandest of all conceptions that has engaged the mind of man. It has its gaps, its ragged edges, its as yet unproved assumptions, its power or powerlessness to stir some of the more temperamental sentiments, and to invoke some of the higher and least sensuous forms of intuition and of faith. It is, however, a structure of reason achieved through long stretches of experience on the part of the most thoughtful and cultured spirits of the race. It is the rationalised experience of millions of individual experiences. And what shall one say in its behalf, when it is assailed as rationalistic and contrary to a wise and carefully guarded empiricism? What better can one say than this: "I am indeed a rationalist, but I am also an empiricist. I am trying to use the reason God gave me to interpret, not only my own experience but also the experience of the race; and not only in my own behalf, but also in the behalf of the race. What, then, are you trying to accomplish; and by what method are you trying to accomplish that which you wish to accomplish? If we differ, however widely in our conclusions, let us not seek refuge under the cover of names."

In truth, the new empiricism which calls itself Pragmatism

is not new in respect of any either of its denials or its positive claims. In its substantial features it is a passing phenomenon which has occurred over and over again in the history of reflective thinking. Like every movement of thought which is stimulated by defects in the dominant existing forms of thinking and is engaged in the polemical effort to replace them rather than to reform them by the quieter and more modestly rational ways, this movement is destined to be productive both of good and—it is to be feared, more abundantly—of evil results. It compels systematic philosophy to examine and validate anew its use of the rationalistic method and to correct, supplement and enlarge the conclusions it has reached by this method, so as to embrace more completely the facts of human experience. But the evils of every form of avowed and polemical empiricism are yet more apparent to the serious student of the history of reflective thinking. By its reasoning it discredits reason; it strives to build itself with fragments torn from other structures; it captivates without producing moral conviction; and having driven out the old conceptions and ideals as to the nature of Reality and as to moral and religious truth, it too often leaves the mind of its convert more empty of thoughts which are solid and enduring than it was before. Worst of all, it is apt to result in dividing reason against itself, and in breaking up experience into warring and irreconcilable elements. Under its influences, both the microcosm of mind and the macrocosm we call the Universe are found to be pluralistic rather than profoundly harmonious throughout, each with the other and each with itself.

In the early days of our era, by the debate between the Christian Apologists and the Gnostics and neo-Platonists, reason and revelation were made antithetic or irreconcilably antagonistic. A total opposition was set up between *ratio* and *pistis* or faith. This led in the mediæval philosophy to the absurd and vicious doctrine that certain deductions might be true *secundum rationem* although in flat contradiction to what is true *secundum fidem*. But genuine philosophy, like science, abhors contradictions of this sort and, although it will suspend judgment, will not admit them. Its spirit is conciliatory; it aims at unity in the interpretation of Reality and in the application of this interpretation to the conduct of life. All time is its own.

How thoroughly but inconsequentially rationalistic and impossible as the gift of a first-hand experience the new empiricism is, might be proved or illustrated at indefinite length. A single illustration will suffice for our present pur-

pose. One of the most succinct and intelligible of all its many declarations as to its nature and aims is stated in the following words:[1] "The whole function of philosophy ought to be to find out what definite difference it will make to you and me, at definite instants of our life, if this world-formula or that world-formula be the true one". Now I submit that no more stupendous "job" could possibly be conceived of, or one requiring more complicated or supremely difficult work of man's rationalising faculty, than this off-hand statement of what Pragmatism proposes for itself to do. The construction of "world-formulas" is the supreme act of reason in its historical development, whether these formulas be wholly false to the facts and principles of reality or only partially in accordance them. But with the comparison of these formulas, and the selection among them of the one which shall *work* best in the interests of a particular individual, is an equally difficult job for the most highly trained rationalising faculty; and even when that faculty is allowed indefinite time for the selection. But now, in order to be good pragmatists, you and I, and other plain men and women, must be perpetually making this choice "*at definite instants*" of our lives.

Still further, how shall we otherwise than by the complex method of induction and deduction, or by conceding verity to selected intuitions, faiths, and ideals, discover what and what amount of "definite difference" it is going to make to us or to anybody else, which one of the various world-formulas we select as best adapted to work well in any particular case? And when we are later told: "It pays for our ideas to be validated. Our obligation to seek truth is part of our general obligation to do what pays," we may assent, but we still wish to know in what kind of coin the payment is to be made.

Is, then, this new form of Empiricism likely in any important way to modify, not to say improve, the future developments of systematic philosophy? We think not. For it will inevitably—such is the very nature of man's reflective thinking—be obliged to submit to the tests of the very method it has affected to scorn, and to the confession that its empirical sources are placed in a somewhat too shallow and restricted analysis of human experience. At any rate, however it may be found to work by its devotees in certain directions, it can never work toward the establishment of a new form of systematic philosophy.

[1] The quotations are taken from *Pragmatism*, pp. 50 and 230.

II.—COLLECTIVE WILLING AND TRUTH.

By S. Alexander.

Contents. 1. *Introductory.—The problem stated.* 2. *Experience of other minds.* 3. *Truth and intersubjective intercourse.* 4. *Goodness and Truth.* 5. *Goodness and Truth as coherence.* 6. *Continued.—Collective and individual believing.* 7. *The science of Truth.* 8. *Mental propositions.* 9. *Truth of mental propositions—Mental science.* 10. *Moral Evil and Error.* 11. *Relations of truth and practice.* 12. *Beauty and its relation to truth and goodness.* 13. *Internal coherence and external success.* 14. *The success of truth—Pragmatism.*

1. *Introductory.*—In a recently published paper,[1] I endeavoured to outline a scheme for expounding psychological processes which depended on the principle that on the different levels of experience, perception, imagination, memory, etc., there corresponded to each form of conation a certain form of non-mental object, or *cognitum*. Thus to instinctive action there corresponded a *perceptum* or percept which was its object. The real world was revealed to the mind under these various forms of percept, memory, etc., according to the character of the conation. But also it was indicated that each conation assumed two varieties, practical and speculative, according as the conation took practical effect and altered or created its object, or instead of practical effect terminated within the mind or at any rate the body of the experient (as in speech). The object of a practical conation was also the object of a speculative conation, which is called a cognition. Cognition was therefore not an independent element in mental life but was only a conation when that conation assumed a speculative form. Thus in any mental process it was not true to say that

[1] 'Foundations and sketch plan of a conational Psychology,' *British Journal of Psychology*, vol. iv., December, 1911, of which the present paper may be regarded as a continuation. I regret that I have seen the work of the six American realists of the platform (*The New Realism*, 1912) too late to refer to it in detail.

there was an element of cognition as well as an element of conation. There was nothing but a conation (with its feeling) and over against it was its object which was called a cognitum, because in the conation we were aware of the non-mental object which existed together with it, which same object was the object of the relevant speculative conation. The highest conative level is that of willing; and it was indicated that the cognitum willed, whether speculatively or practically, was a proposition. Practical willing is commonly known as volition; speculative willing is judging or believing. Thus the object[1] of all willing is a proposition, judgment or belief; by which terms is meant some objective fact in the non-mental world.[2]

This last phrase requires some explanation, in view of what follows, in order to avoid misapprehension. The fact contained in a proposition is a relation between its terms; and it is in the same sense objective as the perceptual circumstances on which it is based, it is only a fuller revelation of those circumstances. If for instance the proposition is a singular judgment of sense, the cat is running across the street, the event of the cat running across the street which might be taken in merely in a complex of sense is more fully presented in the proposition. In the judgment of recognition, what is running across the street is a cat, the perceptual situation is revealed more explicitly because of the explicit relation to the universal, cat. In a universal proposition, the

[1] It will be explained later that though all volitions have propositions for their objects, not all propositions are *objects* of volitions. Some are the 'contents' of willing. See § 8, on *Mental propositions*.

[2] As I use the term, the proposition is what the logicians call the import of the judgment or proposition. It is the *propositum* or *judicatum*. I do not use it as equivalent either to the act of judging or the verbal sentence. Perhaps the constant use of *propositum* would be better but I retain proposition as there is, after Mr. Moore's example, little risk of misunderstanding. In many respects, Prof. Meinong's term 'objective' (*Objectiv*) would be more convenient, as a new technical term; but it would only introduce confusion to use the term at present except with the implications he attaches to it. For him the objective is the object both of the judgment and the Annahme; whereas I am assuming that the judgment and the assumption have not identically the same object. This is not the place for a discussion of Prof. Meinong's work, which could only be a matter of considerable length. (I have touched on the matter in the previous article (*B. J. of P.*, p. 265, and note)). As at present advised I regard the assumption as standing to the judgment in a similar relation to that of the idea to the percept—a view which is not the same as that which Herr Meinong combats, that an assumption is simply *vorgestellt* (ed. 2, pp. 132 ff.). That view he attributes to Mr. Russell; whom, however, I had understood in the sense taken by me. (Mr. Russell withdrew his own suggestion, I believe, before ed. 2 of the *Annahmen*.)

cat is carnivorous, there is no perceptual circumstance present at all, but the relation of the universals remains a fact of the objective world. Thus a proposition of singular existence is itself a singular existent. A proposition of universal import (subsistence) is itself a subsistent. There is therefore no difference between the meaning of the words "that Cæsar crossed the Rubicon" or "the fact that Cæsar etc.," and the meaning of the words "Cæsar crossed the Rubicon". The phrase, the fact that or that Cæsar, etc., means only the fact described by the words, Cæsar, etc. A proposition, if it refers to a singular existence at a certain time and place, is itself that singular existence in time and place. We need not raise the question whether universal propositions are timeless or not; though I should certainly deny that what holds, not at some particular time, but at any time, is therefore timeless. But at any rate a proposition is an objective fact that has the same differences of time reference as the objective fact which it contains. It is indeed independent of the particular date at which the judging act occurs, but it is not independent of the date which itself contains.[1]

The proposition which is the object or cognitum of volition is objective, but it is merely believed or judged. There our exposition stopped. But when we take into account collective willing, we have two new notions introduced, goodness or rightness in the will and correspondingly truth or reality in the proposition. Thus if willing is taken to include both practical and theoretical volition, and goodness is understood as its perfection, we might seem to have the result that good willing has for its object true belief.[2] But there is still the

[1] Contrast with this the statement of Prof. Stout in his paper *Some Fundamental Points in the Theory of Knowledge*, p. 18 (in St. Andrews Quincentenary Publications, Glasgow, 1911); and also of Prof. Meinong, *Über Annahmen*, p. 64, ed. 2 (1910). It makes no difference if the phrase, "that etc.," stands for an assumption instead of a proposition. We may assert That Cæsar should have failed to cross the Rubicon (or Cæsar's failure to cross the Rubicon) might have altered history. Cæsar failed to cross the Rubicon is now an assumption or an assumed fact, but it is still an objective fact (though not a believed fact, still less a true one). But it is fact still, and not timeless.

[2] The word belief is used throughout for the object of the judgment; for the -ed and not the -ing, to borrow Mr. Lloyd Morgan's happy shorthand (*Instinct and Experience*). In common usage it stands either for the act of believing, or the object believed. But in the plural it always, as far as I can judge, stands for that which is believed, as I use it here. There is the same diversity with other terms; thus interest is a feeling; but interests or an interest stands for the objects in which we feel interest, *e.g.* the phrase, a British interest, or a poetic interest, and the like. (Compare Prof. W. P. Montague's remarks on what he calls psychophysical metonymy—*New Realism*, pp. 256 f.)

distinction of practical and theoretical will, and goodness in its common acceptation is a character of practical will, and the science of it or ethics is concerned with practical action. On the other hand, true beliefs or propositions are those which are believed by theoretical willing, and the system of such beliefs constitutes science or true knowledge. It is now our object to investigate the topic here raised; to consider goodness and truth in their affinity to one another. In the course of this inquiry we shall have to consider also in their bearing on one another evil and error.

Good conduct and true thinking are thus departments of right willing in general, but right thinking is not a department of good conduct, except in a special sense. Its relations to good conduct in this respect are intricate and call also for investigation (§ 11). Both, it would seem, imply the stripping off from the individual will of personal idiosyncrasy. In the case of morals, it is the abandonment of selfishness; in the case of thinking, it is equally the abandonment of personal peculiarities, so that what is true, it would seem, is acceptable to others. Psychology describes the way in which such impersonality is attained. Ethics and the science of truth are concerned with the same subject, of impersonality, but from the point of view of the criterion.

But there are two things implied in good conduct and true thinking which require preliminary discussion. Both goodness and truth mean acknowledgment on the part of other men. They depend in the first place then on the recognition by one man of consciousness in others. And secondly they imply communication between individuals, or intersubjective intercourse.

2. *Experience of other minds.*—The recognition of other beings as conscious subjects depends on a direct experience to that effect. It cannot be regarded as a mere inference from the outward actions, gestures and speech proceeding from certain bodies, and an interpretation of them on the analogy of ourselves. Such interpretation and inference do occur, but only when there has been already a basis of direct experience of others as conscious beings. In the first place, the account in question can hardly apply to dogs or other animals, some of whose actions appear to depend on such recognition of other animals or men as a dog can have. In the next place, it is difficult to understand how such a notion as the consciousness of others could arise by analogy to our own. For our own consciousness is enjoyed by us (in connexion with our bodies) and is not contemplated. Without some clue in our experience, how should we hit upon

the wonderful idea of a foreign consciousness, the very essence of which is that we cannot share its consciousness, but it can only possess its own? The clue would seem to be found in those elementary experiences, on the level of instinct, where co-operation, reciprocation or rivalry is necessary in order that the experience should have its full flavour. Such are the experience of filial love, of parental love, or of sexual love, and competition and co-operation of all kinds. Thus tenderness towards a child is not merely not felt towards a warm soft material object, which fails to evoke the instinct of tenderness; but where that instinct is evoked is incomplete without reciprocation (like the tenderness to a fly in distress); and still more is more completely felt the more the tenderness can be reciprocated. Thus it is felt more towards an affectionate than to a cold child, and it is felt more and differently to a child and to a puppy. To take a simpler example: we may press a yielding object and become aware of its soft firmness and have besides the experience of our own effort of grasping. But there is all the difference between this and the experience of a hand which in any degree returns the pressure of ours; and that is why we so much dislike an unresponsive hand which seems to us inhuman and disappoints expectation. Again rivalry for the possession of food is a different experience not only from hunger for the food, but from the feeling which is felt when the rival is inanimate; *e.g.* when a dog's enjoyment of his bone is obstructed by the shape of the ground which makes it roll away and not by another dog or a man. The experience of another man's trying to get the same thing as yourself is a direct suggestion that he is *wanting* it, and is a different experience from seeking the object and merely being obstructed. When once there has been the experience of rivalry, the inanimate agent which defeats us may be credited with consciousness, as the dog conceivably may endow the something which rolls away its bone with the attributes of a rival dog; or the savage may imagine a demon who defeats his purposes. Once more, the emotion of love to the opposite sex is not the same feeling when there is not reciprocation, and is accordingly different from sheer selfish lust.[1] A lover may of course feel genuine love when

[1] Compare as to this the following interesting passage of Shaftesbury, *Inquiry Concerning Virtue and Merit*, bk. ii., pt. 2, § 1, p. 128, ed. 1727: "The courtesans and even the commonest of women, who live by prostitution, know very well how necessary it is that every one whom they entertain with their beauty, should believe there are satisfactions reciprocal; and that pleasures are no less given than received. And were this imagination to be wholly taken away, there would be hardly any of the

it is not returned, but his expectation or hope is for reciprocation, and his disappointment implies that the person is capable of returning the emotion, though there is no return made to himself.

Thus the immediate basis of our experience that another person exists is a direct ingredient in certain feelings, which ingredient is not present if that other being were inanimate or unconscious. An automaton might look and even act like a child, but if it did not participate in our behaviour to it we should miss the flavour of tenderness. These experiences exist, then, only so far as there is recognition of something co-operant or competitive, which does not merely behave as we behave, show signs of hunger, or anger, or of sexual desire, but actually takes part in our experiences, so that we feel affection, or rivalry in pursuit, or love if it is a person of the opposite sex, or jealousy if it is one of the same sex; does not merely act as we do, which an automaton might do, but responds to our action and fulfils it; is therefore a being like ourselves. It is therefore not because under similar circumstances foreign bodies exhibit behaviour like our own that we believe them to be minds like ourselves, by an act of inference; but because in one and the same situation they take part with ourselves in a joint action in which their part may or *may not be* like our own, and because without such response on their side our own experience is incomplete, that we experience their presence, not by way of inference but directly. We are aware that there is something of our own kind, our equal, something in this sense like ourselves. The child's life of relation to parents and family, and the primitive man's life of domestic relations and the chase, afford ample occasion for this, mainly instinctive, experience of other consciousness. With this to start from, we can understand how the recognition of the existence of other consciousness is amplified by all that process whereby a person such as the father, like ourselves but at first mysterious and overmastering, becomes understood by help of imitation and imagination, and whereby in the end we come by knowing others to learn more of ourselves. All this has been described so well by Prof. Baldwin and others, to say nothing of Herbart, that we need not linger upon it. Further we can understand how the child comes to impute personality

grosser sort of mankind who would not perceive their remaining pleasure to be of slight estimation."

The same consideration accounts in part for the horror of stories like that of Periander and Melissa in Herodotus, and other such cases of necrophilia.

to its doll or the savage to stocks and stones, by an act of projection, which is readily intelligible as an extension of a real previous experience, but cannot be used to account for that experience or to supply a foundation for the belief in other persons.

So far we have been dealing mainly with the instinctive type of such recognition of other persons or consciousnesses, and have included its occurrence amongst animals. But the practical instinctive co-operation or competition exhibited in certain instinctive experiences is immensely enlarged in range amongst ourselves; in the first place by speech with its reciprocal reference on the part of different persons to objects common to them, as well as of course through its use by others directly to describe to us their own minds. But above all it is enlarged by the combination of wills in practical affairs or of intellects in the pursuit of knowledge; in virtue of which we approve practically or agree theoretically. On the reflective stage, these acknowledgments[1] of others, experienced in their moral judgments more obviously, and also in their scientific agreements, are the later direct experience of other persons.

Only we still cannot say that there is, for all this peculiar direct experience, recognition of others, or better said, knowledge of others, in the sense in which an angel would contemplate two consciousnesses engaged in some common pursuit. We cannot contemplate even our own minds, much less the minds of others, and while we enjoy our own we do not enjoy the mind of another. Thus B's mind is not laid open to the inspection of A, he is not aware of it as he is aware of B's body; he only has from certain experiences the assurance *that* there is a mind like his. We know *that* there is a foreign mind, something of our own rank, not a mere physical thing; but our knowledge of *what* it is, is symbolic. We transfer the contents of our own enjoyment to this foreign being, and give indefinite scope to our sympathetic imagination[2] in this con-

[1] I borrow the term acknowledgment or recognition (Anerkennung) from Prof. Münsterberg (*Grundzüge der Psychologie*, ch. i., *passim*) without the implications contained in his use of it. Prof. A. E. Taylor in his *Elements of Metaphysics* (1903) states in the clearest way the inadequacy of the notion of inference from analogy to account for our having the idea of a foreign self (p. 205) and insists that 'the very existence of my own purpose in life,' implies directly the existence of other selves. But I am unable to judge from his text how far the above attempt to trace the awareness of other selves to the peculiar experience described above, on a lower level than moral recognition, is identical with his statement of the case (bk. iii., ch. ii., § 3).

[2] I need hardly say that imagination of another's mind is not imagination *of* another's mind, by way of contemplation of it, as we may have

struction, fencing our imagination by careful verification. Even the experience *that* there is a foreign mind, since it contains the notion of mind, is not knowledge, like the knowledge that there is a stone. But it is assurance grounded on direct experience. It is an act of faith but forced upon us by a peculiar experience, and in itself it is not invented by inference or from analogy. It is only the details of its constitution into which we need to enter symbolically. Those who maintain that other subjects are inferential are probably misled by the symbolic process of constructing the enjoyments of others after the likeness of our own into supposing that the existence of such minds is itself also matter of inference.

3. *Truth and intersubjective intercourse.*—There is a further topic to be discussed before we go on to consider truth and goodness in their relations. Intersubjective intercourse in practice discovers and indeed creates goodness. In speculation it discovers truth or true reality. But the process by which it attains this result would not be possible, if the objects of willing in the first place, or what here concerns us more the objects of cognition, were not extra-mental or objective, as we are here supposing them on the ground of fundamental experience to be: independent of the mind therefore except in the sense that the form which they assume varies with the character of the independent mental process to which they are revealed. Only one answer is possible on our general principle to the old question whether when ten men look at the Sun, they see one Sun or ten. The answer assumes different forms, according as we place ourselves at the point of view of an onlooking spectator (an angel) who can contemplate both the persons and the Sun, or at the point of view of the persons themselves. From the point of view (*a*) of the experients themselves, the question whether they see the same Sun or different ones is unmeaning before they have knowledge and communication, for there is then no

imagination of, say, the grounding of the Ark on Ararat. I can only imagine your state of mind in so far as I have imagination *of* the situation in which you are and then experience from myself how it feels to be in such a situation. I do not feel your feeling but I read my feeling into your imagined position, put myself in your place. That is also the only way in which I can imagine my own state of mind, namely by imaginative contemplation of my own situation and feeling the actual feeling appropriate to that imagined situation. The same thing is true of remembering my feeling. It is in this sense that I speak of constructing the details of another person's mind symbolically—his situation becomes the symbol of a feeling which I experience sympathetically (*cp.* Lipps, *Æsthetik*, i., p. 140). I am not, however, venturing on the difficult question of the scope or interpretation of Einfühlung or Empathy, the doctrine of which we owe to Prof. Lipps.

comparison. Each person is aware of an object (call it Sun), where the word object means that which is presented to his mind, or is compresent with it so far forth as the experience gives him cognition. There is no mysterious revelation of something which is the same for all individuals or even for himself at different times. What is revealed to him is only the object (contemplated and not enjoyed, distinct from himself) of which he has experience.[1] Further experience reveals to him that his own objects are continuous with one another and can be synthesised: for example his percepta are syntheses, discovered by experience, and through practice, of various sensa and ideal elements, and by this means he becomes aware of 'things' perceived and relatively permanent as compared with his changing sensa. When communication arises, a further extension of this synthesis (but now between the objects of different minds) reveals to him the one identical real sun, of which he and his fellows have partially different experiences. The real Sun now becomes the object of the individual observer. From the point of view (*b*) of the onlooking mind, the answer is that the ten men see ten different aspects of one and the same thing, the Sun, or that the one real Sun is revealed to them as ten real selections from its whole being or that the thing called the Sun is the synthesis of the ten varying objects presented to the ten observers and of course of much more; that this thing is the whole of which they are the partial revelations;

[1] Observe, the object is that which is present as it is experienced, not as it is named. We name the object for the most part by its central feature which may of course vary according to our interest or purpose. But no object is clear cut: it has a fringe; or to vary the phrase, it is fluid. But the fringe, though not named, is part of the experience. Only because objects are thus fluid is it possible that they should be continuous with each other, *e.g.* that in perceiving we should synthesise one aspect of the same thing with another; what is fringe in one experience becoming centre in the next. It is only as so interpreted that I can attach a meaning to the phrase that an experience 'points beyond itself'. If this statement is taken to mean (as it often seems to me to be taken) that my experience has a reference to something not given in the experience, that it is really a contradiction in terms. There can be nothing in an experience which is not experienced. How should we be aware of the something beyond the experience, except it is presented in experience? The truth is there are elements in any experience (the fringe or whatever we call it) which are felt not as a transition to something *else*, but in the way in which transitional objects are felt, as mental yearnings, the object of which can only be described as 'something or other'. When the transition is effected we say retrospectively they were transitions to the now experienced object which completes them. But what completes them was not given in the first experience, but is learnt in a fresh one continuous with the first.

and that this real thing is also an object to any single mind which has performed the necessary processes of synthesising and all such other processes (including thought) as are involved in the careful and precise and full acquisition of knowledge. From either point of view, so long as the question can properly be asked, the answer is identical, that the ten persons see one thing under diverse aspects.

But throughout the process by which the individuals come to be aware of the object as one thing, they are engaged with objects independent of themselves. Inter-subjective intercourse does not account for the *objectivity* of knowledge, it only accounts for its impersonality. Objectivity, in the sense of independence of mind, is given as an original fact of all our experience. But intercourse with others enables us to discover *true* objectivity, because it frees the vision of error in the first place and partiality in the next, and by doing so enables us to see the synthetic and complete whole. For in the course of communication with one another we find that the same thing in which we are interested practically or theoretically presents itself to each person according to his position and antecedents under different aspects. Among these different aspects we distinguish two kinds: the first group are those which are presented to the observers because of their mere idiosyncrasies and the same object cannot be presented to a second observer who puts himself under the same conditions. Such are the defective objects revealed to the colour-blind, the prejudiced, or the incompetent. Such objects form experiences which are incommunicable. The second group consists of objects which others can equally well observe if they put themselves into the same position. Thus if two men stand at different corners of a table, each sees primarily his own corner; but they can exchange places and if they are without disabling idiosyncrasy each can then see the corner which the other saw before. Now by the help of language (or other means of communication) these different objects can be communicated from the rest to any one, or they may be shared between all. In this process, the attempt to make the first group communicable breaks down and these objects are rejected as erroneous; they are objective but not real or true. Doubtless it is only by actual trial that we learn which objects are the product of mere idiosyncrasy. They will not fit into one scheme with the objects revealed to others. And doubtless what at first seemed idiosyncrasy may come on occasion to be regarded as originality of insight; its object then is found to belong to the second

group. But it is the second group, of communicable objects, which are woven together into the complete revelation of the thing. The process is not without difficulty, for these objects may be partly coherent and partly they are contradictory or at least incongruous, and it is such difficulties in particular which spur us on to reconcile these divergent elements by looking more closely at the object in the way which is rewarded by the discovery of synthesising concepts and laws. In this way the fully known object is a contribution from many minds which bring their various information about the same or like or unlike things into a common stock. In this way the individual vision becomes depersonalised or to say the same thing in other words, the object is revealed in its full or impersonal as contrasted with its partial or erroneous personal character.

But, now, the whole of this process becomes meaningless unless the objects in question are recognised from the beginning as extramental, and the process of communication strictly comparable to that of handling things practically. If they were in any sense one with the minds which communicate, the process as it seems to me would be unintelligible. It would be obviously so if the objects were mental presentations, like the ideas of Locke; but it would also be unintelligible if the being of the objects were bound up with the mind so that subject and object constituted a duality in unity, according to a famous phrase. For in that case no one subject could release his objects from their unity with the subject so that they could be available for another subject's use.[1]

[1] I am of course referring to Prof. Ward's chapters on this topic in *Naturalism and Agnosticism*, vol. ii., chs. xvi., xvii., which gave the concept of intersubjective intercourse its present position in English philosophy. Nothing can be clearer or more admirable than his exposition that the so-called subject of universal experience is continuous with, or an extension of, the individual subject. But unless I have gravely misunderstood him, I cannot see how the continuity is ever to be effected, the extension to take place, upon this conception of the subject-object relation. That it does as a matter of fact take place is not in doubt, and Kant it was who laid the emphasis upon this communicable element in all knowledge. But Kant is content on the whole to state the fact and what it implies. But he also cannot evade the same problem of reconciling the data of sense and the consciousness 'as such' (überhaupt), which recurs in Mr. Ward's more concrete attempt to trace the method of unification. Doubtless Mr. Ward's exposition is enough to overthrow any interpretation of ideas which is coloured by introjectionism. But does it succeed for himself? There is no communication possible it seems to me for Mr. Ward's individual subjects. And naturally for him concepts become abstractions found to work, as they are for physicists of the school of Messrs. Mach and Pearson.

4. *Goodness and Truth.*—We can now proceed to compare right practical willing with right speculative willing. The first is moral goodness, the second is true believing. Truth or the system of true beliefs is the system of propositions believed in true believing, and strictly speaking it is these propositions which are true or false not the believing of them. These propositions are facts or laws of the real world, and the system composed of them is called truth when we wish to indicate its connexion with the mental acts of believing or knowing and the same system is called reality when we do not think of the means by which it is discovered. But before we attempt to conclude from right practice to right thinking, let us first contrast them.

Practical will differs from speculative will in this that the first by its own action creates the object which it finds, while believing or judging only finds its object. Practical willing consists then in certain action by which certain propositions are made true. Thus if I murder a man I make true the proposition that he is dead. Believing merely discovers its propositions, not being practical. Certain questions may therefore be asked which are answered somewhat differently in the two cases.

(1) What makes an act of practice (to use this in place of the cumbrous phrase practical willing) good and what acts must I do to be good? The answer to the second question is furnished by the rules of practical morals which embody the approvals and disapprovals of men. The first question is the abstract question of ethics, which also has to systematise the rules of morals. In doing so, in systematising the moral judgment, ethics includes the answer to the question, what propositions does good conduct aim at making real. They are the various objects willed, when we will rightly; in particular cases, they are such as the following: this property is distributed equally, this man is preserved alive and not killed, these words are spoken which mean a real state of facts, a beautiful picture comes into existence, a piece of beautiful nature is brought to your view by paying your railway fare, money is given to you in your distress, where the word you is understood as explained above in section 2. But it would be erroneous or at least inconsistent with usage to describe these objects (these propositions) as goods or the totality of them as constituting what is called The Good. They are only goods in so far as they enter as components into the condition of persons; that is simply personal satisfactions. Thus the existence of a statue is a good only so far as it is enjoyed æsthetically; or again, to be in presence of a beauti-

ful scene. Riches are a good as used and enjoyed. A dole is a good to the recipient as relieving distress and producing happiness. Thus goods as commonly understood are personal satisfactions; where by person is meant the union of object or contemplated self with subject self, so that what happens to a person or is done by him is also enjoyed by him; and the term satisfactions covers any form of enjoyed experience, such as happiness or æsthetic pleasure, or the dispositions or capacities of such. It is the summary or whole of personal satisfactions which makes The Good, and it is not necessary here to discuss its items more particularly. Now these goods are not the objects willed by myself or others, but they are the consummation attained by willing. That consummation being achieved by persons is a personal state. It is not however in our terminology the object willed; and though it may sometimes be called the end, the term end is generally applied to the object entertained in willing. To avoid these difficulties of usage let us call The Good, described as the totality of personal satisfactions, the Ideal which good willing secures.[1] It is thus a system of relations between persons. It is not directly the *object* of good conduct, but it is that which *ought* to be secured by good conduct.

It has been assumed in the above that the practical actions with which ethics is concerned, or with which judgments of goodness have to do, are willing. Brevity demands some amount of dogmatism, where our concern is not so much with goodness as with truth. It is not meant that instincts or dispositions, like kindness of heart, or an æsthetic or scientific bent or any of the endowments of mind which may be called gifts of nature, may not deserve the attribute

[1] In his *Manual of Psychology* (bk. i., ch. i., § 4), Mr. Stout distinguishes these two senses of end, as that which is entertained before the conation is completed and as the satisfaction of the conation. The first he calls the end, the second the end-state. Since "end" means sometimes object of will, but sometimes satisfactions (*cp.* Man's end is pleasure or holiness; or, O happiness, our being's end and aim) I prefer to speak explicitly of non-mental objects of will and ideals of will. What is important is to recognise that what we will, in the sense of the *cognitum* of will, is not a state of the mind itself. The object willed is non-mental. That which is enjoyed in willing and by means of willing (the actual contents of the will) is mental. When I will my happiness as my ideal or end, the happiness is on its non-mental side (what is commonly known as the conditions of it) the object of my will, but as a state of myself it is the enjoyment of that object, that is the attainment of it, and is thus the contents of the consummated will. I do not mean that we may not say that we will a mental state; just as we remember a mental state. But I believe the view that, in willing, our object must be a state of ourself, to be a mistake of analysis, which I once shared, and the source of much confusion.

of goodness, but only that it is primarily the will which is morally good, and that these other gifts are the materials upon which the will is based which issues in good conduct. At any rate, if any reader disputes this limitation of moral goodness to good will, let him remember that we are concerned here with practical willing as a clue to theoretical willing, and that practical willing is moral even if it is not the whole of morality.

(2) The parallel questions to be asked in respect of belief are these: What makes believing correct or what makes beliefs true? and secondly, What propositions must I believe to have truth? The answer to the second question is supplied by the sciences in detail. Another science answers the first question, and explains what in the abstract makes truth true, and then having regard to the truths of the special sciences what relations obtain between them in virtue of which they are systematised into a body of truth.

But now consider the different ways in which these answers fall out in the two cases. Ethics is in the first instance a study of practical willing, from a certain point of view, in order to find out the difference between good and bad will. It is only secondarily concerned either with the propositions which are willed, or with the system of goods which forms its ideal, vastly as this latter subject must bulk in its inquiries, because of its concrete character. For the satisfactions which make up the Good have not their moral goodness in themselves, but only so far as they are right. As Aristotle said long ago it is not merely the fact that we enjoy a satisfaction that is good, but how much we enjoy of it and when and where and in what relations. But these goods are attained by the will, which as practical does not find its object and its consummation, but creates it. Each good is produced by its appropriate will and it is vain to seek a criterion of goodness therefore except in the will itself. Take one example to serve for many. A person possesses sensibility for music. Enjoyment of music is for him part of the Good, or is a legitimate good, just so far as acts on his part of indulging the taste and on others' part in securing him the enjoyment are legitimate, since it is these actions which create the enjoyment. Maximation of satisfactions means economy in their distribution, and that wise economy is the right relation of persons which is expressed in action. Whether the action in question is voluntary or not is a secondary matter.[1] On the other hand the science

[1] Thus I am unable to accept the doctrine of Mr. G. E. Moore that right conduct is merely the means to secure the Good. This appears to me to overlook the intimacy of connexion between our satisfactions and the

of truth is concerned in the first instance with propositions, and asks what makes the difference between true and erroneous ones. It deals only secondarily with the believing state of mind. For believing discovers its proposition and does not make it; hence although by examining the act of believing we are led to understand the object proposition, the proposition itself it is which is revealed to the believing will and determines it. Hence the rightness of the believing is fixed by the truth of the proposition or the belief. Thus while true or correct believing is indeed a *clue* to the nature of truth which is what corresponds to it in the belief, on the other hand good willing actually is goodness. Ethics therefore is a science of mind or rather it is a science of persons

acts of which those satisfactions are the results; and to assimilate goods to truths which are found by means of thinking, whereas goods are found but are also made by action. As I understand the matter all goods are satisfactions of persons and they are goods because they satisfy, but the problem of conduct is not so much to enumerate the goods as to determine their distribution. On that rock the pleasure theories, and other theories as well, have split. Now it is the distribution of goods which makes the totality of them into the Good or Ideal. But how else can we determine the ideal distribution but by reference to the activities of which they are the consummation? Thus we must distinguish that in goods which makes them ideal from that which makes them goods. And this criterion must be found in their systematic coherence which is brought about by the adjustment of functions, whether in the person or as between persons. Why then should we not say, it may be asked, that the Good is the adjustment of satisfactions and right action a means to this adjustment? Because the adjustment of satisfactions is unintelligible without reference to the functions of which they are the satisfactions.

I am however so far in agreement with Mr. Moore, and express my indebtedness to him for it, that I now recognise that the ideal of willing (and still more the object of it) cannot be described as itself good willing, but as a system of goods or satisfactions.

Mr. Moore's doctrine is of course involved with his central thesis that "good" is a property which is as unique and unanalysable as "yellow". Perhaps I may add here the reason why I demur to this. Granted that that flavour of satisfactions in virtue of which they are called good (or that flavour of propositions in virtue of which they are called true), may be something simple, like yellow or any other quality which we accept as a datum of our experience; what hinders our stating its conditions? just as we may say that yellow is a property which light has when the physical undulations have a certain wave length? This does not deny the uniqueness of the property yellow. (On the contrary I should be prepared to maintain that this uniqueness is unintelligible in the end without the determining conditions.) Neither does the doctrine that goodness and truth and beauty imply coherence deny their uniqueness in our experience. (Compare a remark of Mr. A. E. Taylor in 'Truth and Practice,' *Philosophical Review*, vol. xiv., 1905, p. 269.) The method of Mr. Moore must if followed consistently put an end as it seems to me to all scientific inquiry and reduce science to the bare chronicling of qualities.

in our sense of that term; the science of truth is the science of propositions and is only concerned with mind or far as these propositions are concerned with minds. And I am deliberately omitting here to consider how there can be truths about minds, if truths are the *objects* of speculative willing, or how there can be such a thing as a science of psychology or ethics at all. The matter is, to avoid complication, deferred to subsequent sections (§§ 8, 9).

5. *Goodness and Truth as coherence.*—What constitutes willing good is its impersonality, that is that the individual will is consistent with other wills and also as part of this same result consistent with itself. This coherence is secured in practice because of the actual practical conflict, co-operation, and adjustment of persons in a society. It is not our business here to discuss what the fundamental impulse is upon which this adjustment rests: whether moral sentiments are a generalisation of resentment (Prof. Westermarck); or more simply are an extension of the paternal sentiment (Mr. McDougall and Aristotle before him); or whether we should not fall back upon the older (and I believe on the whole simpler and more illuminating conception) of Adam Smith that sentiments are moral when attuned to the impulses of other persons by the operation of sympathy, which sympathetic adjustment is represented or symbolised in the judgment of an impartial spectator (whose place in our view might be taken by the contemplating mind of an angel). Whatever the source of the moralisation of impulses, sentiments are practical, they have hands and feet, and they take effect through the various forms of practice and in the end through willing. The adjustment and congruity, or if I may borrow the term from Leibniz, the compossibility, of a society of wills, is represented in the individual person by such an adjustment of his separate impulses to action as secures self-consistency in him also. For he is himself social in instincts as well as self-regarding, and in the satisfaction of his social instincts not only do they become moderated or exalted into tune with other persons, but his self-regarding impulses suffer adjustment to his social ones, and are thus drawn into the net of the social system.

In this fashion the congruity of collective willing is attained, and it results in the maximum satisfaction of persons, through the recognition of their needs or *claims*, as *rights*, as the fulfilment of those claims. Coherence in the wills is the determining feature of goodness; and its result is the coherence of persons into a moral society with the attendant disapproval of divergent action as evil. On the mere object side of the collective willing this means coherence in the propositions

created by good willing. In this sense, the object of the murderer, though realised as a fact and *true*, is incoherent with the mass of propositions secured by good will, for example, with the general proposition that life in the society is secure, or with the other propositions concerning him and others, which imply the maintenance of life.

Some remarks may be added to avoid possible misconception. Good willing is impersonal, not in the sense of being deprived of personality, but in the sense that it is purged of mere idiosyncrasy. It is unselfish, but not selfless. On the contrary, the attainment of impersonality or impartiality is the highest exhibition of personality. Secondly, while goodness is described as the coherence of wills, it is of course implied that it is real persons, material wills, which are engaged. You cannot have goodness without persons who love and hate, pursue business, fight, or preach. The coherence in question is not the coherence of mere abstract laws, but the coherence of the sensual wills which obey these laws, or rather for which these laws are made. The coherence is but the form to which the persons engaged are matter. But you may have persons without coherence with each other and they are bad persons and without form. In the third place, the coherence in question is that of the wills within a given society. It may therefore be a limited coherence. What is good in one society may be inadequate and incoherent in a larger one. Yet goodness is a significant reality even if the reality is not inclusive of all human beings. It cannot therefore be said that there is only one system of goodness, though it may well be the case that every system of goodness exhibits certain pervasive features corresponding to elementary human claims.

We may now use this analysis in order to understand the nature of true believing and of truth, or true beliefs, or knowledge;[1] still assuming for the present that the truths in

[1] I am throughout taking knowledge and true belief as equivalent. Mr. Russell in his *Problems of Philosophy* (ch. xiii., p. 205) objects that this is not consistent with usage and that we may entertain beliefs which happen to be true but are believed on false grounds, and such true belief is not knowledge. But there is a great difference between having a true belief or believing truly and merely believing what is true. A person may be in the state of mind called belief towards a proposition which is true and yet not have knowledge, but if he believes truly or if he entertains true beliefs he has knowledge, for his beliefs are coherent with the system of true propositions. When true belief is said not necessarily to be knowledge, the word true is used objectively and the word belief subjectively: the person's believing is of a proposition which happens to be true. When true belief is declared to be knowledge, both words are used objectively or else subjectively, and in either case coherence is implied and

question concern non-mental existence. True or right or correct believing in the individual is not only self-consistency or coherence in the individual speculative will, but consistency with the believing or speculative willing of others. Correspondingly, truth itself in beliefs or propositions is their coherence. Once more this coherence is but the formal character of truth which makes it truth; truth in the concrete is coherent propositions. · Remarks need to be added here correspondent to those which have been added above in respect of moral coherence. Truth as coherence does not consist merely of universal or abstract propositions, but includes propositions of sense. It is impossible to think of a coherent system of knowledge without including sensible objects and even sensa amongst its elements. This follows at once from the description here given of the propositions, objective facts, which constitute truth.[1] Secondly, the coherence which makes truth true is the coherence of the propositions which concern the sphere of reality considered. There may be coherence short of the ideal coherence of a completed universe[2] (if indeed any meaning can be attached to the completion of what is essentially in time). As with the goodness of a limited system of men, a limited system of truth may cease to be true in its empirical or non-categorial characters when the subject matter is enlarged by increasing knowledge or merged generally in a larger whole of relevant data; without ceasing therefore to be true within its limited boundaries.

The coherence of propositions is that relation between them in virtue of which they are or can be connected into a system: their compatibility with or adjustment to one another. Propositions are incoherent in so far as, objective as they all are alike, they do not coexist in one system. The proposition, to take an illustration, that the water is boiling is inconsistent with the equally objective (though false) proposition that a chicken or ice can maintain their characters

therefore knowledge. In fact while belief commonly is used for a state of mind beliefs mean the objects of believing. (*Cp.* note[2] to p. 16 above.) I use belief habitually in this paper for the proposition itself in distinction from believing, unless the context makes the sense obvious.

I am aware that this consideration has no force if Mr. Russell's recent contention is right that judgment involves the judger as well as what is judged. On that view a belief will involve in its constitution the act of believing. For me the belief is only revealed through the believing and does not depend on it.

[1] See on this topic, G. F. Stout: 'Immediacy, Mediacy and Coherence,' MIND, N.S., vol. xiii., 1908.

[2] Mr. Joachim's conception of a completed truth (*The Nature of Truth*, 1906).

of life or solidity when immersed in the water; while it is consistent with the proposition that a chicken plunged into it dies or ice is dissolved. The incoherence may be complete or partial; when it is complete one of the propositions is false entirely; when it is partial, a modification of one or both secures coherence. The notion of coherence seems to present little difficulty, for true propositions never can be incoherent; all that seems necessary to add to this bare notion of compatibility is that of organised or systematic connexion, whereby truths as it were strengthen or help out each other, like the functions of an organism. So far as there is difficulty it is felt more acutely with the notion of incoherence between propositions. For when we speak of such incoherence, though one or both propositions must be false, we seem at the same time to be treating the false proposition as if it were a real fact, which might conflict with some other real fact. Incoherence therefore requires explanation. It is not in the first place to be confused with that mutual interference between true propositions which do coexist and lead to a fresh result different from either, as in the parallelogram of forces, or may neutralise each other.[1] Nor again does the incoherence lie in the mental conflict between the acts of attempting to unite the propositions within the mind of an individual. This conflict of mental acts (we shall afterwards call them mental propositions) which is a process that can be traced though all its stages (it is known as the process of negative apperception) leads to the modification or even the destruction of one of the acts. But though it is by such 'mental refusals'[2] that we become aware of the incoherence of the propositions which are the objects of the mental acts, the mental incoherence involved in the persistence of the acts is not the incoherence of the propositions themselves. Wherein then does the incoherence consist? The answer is that it is a physical incompatibility (we are supposed to be dealing with physical propositions), not any supposed mental or logical incompatibility. For the propositions are objective non-mental facts, and moreover they are revelations of actual physical nature, and even if a proposition is false it is a misreading of actual reality, and its elements[3]

[1] I regret to find myself here in disagreement with Prof. E. B. Holt in *The New Realism*, according to whom error is a particular case of contradiction such as is exemplified by these cases of conflict.

[2] The phrase is P. G. Hamerton's (in *The Intellectual Life*), not used however in this connexion.

[3] And not its elements only. See later, § 10, on Moral Evil and Error.

are taken from actual reality. Hence the propositions are incompatible in virtue of the physical incompatibility of the characters contained in them, and the incompatibility is discovered by experiment. Let the propositions be, Here is water (let us suppose this true); fishes live under water; kittens live under water. All these are equally believed. But experiment shows that the physical characters of water suffer fishes to live in it, but not kittens. Trying the experiment of immersing the kitten is bringing the belief that kittens can live in water into relation with the belief that here is water and the discovery is made that the physical character of the water is fatal to the kitten, with its physical characters, which do enter into the judgment, though that proposition is false or only an hypothesis or assumption. The relation contained in the false proposition does not therefore consist with the other proposition. In making the experiment, we are not treating the proposition Kittens live in water as if it were really true, but we are treating it as dealing with the revealed physical characters of kittens, life, and water; and we handle these characters in this kind of experiment by taking them as we find them in real things and situations. We might reach the same result by a different kind of experiment, an ideal one, by remembering that kittens do not possess gills. And if we take experiment in the extended sense, made familiar to us by Prof. Mach amongst others [1] in which it is applicable not only to percepts but thoughts, not only to physical matters but to ideal matters like mathematical conceptions, we can say generally that it is experiment in all kinds of propositions which reveals the failure of a false proposition to coexist with other propositions about the same subject matter; and because of actual incompatibility between the real characters (whether physically real, or otherwise, *e.g.* mathematically, real) present in the propositions, so far as those real characters are present and in the form in which they are present in the propositions.

6. *Continued.—Collective and individual believing.*—But it is more difficult to understand how such coherent beliefs can be declared to be the corresponding object of coherent believing in the collective speculative will. Practical wills conflict and co-operate in actual fact and we can readily understand both the adjustment between separate persons and the adjustment within the individual will which goes along with the first. But believing in one person does not conflict with

[1] Mach, *Erkenntniss und Irrthum*, 'Über Gedankenexperimente': G. F. Stout, 'Error' (in *Personal Idealism*), § 9.

believing in another except it passes into practice;[1] and it might seem as if we could speak of an adjustment of believings only within the individual, in so far as he takes up the beliefs or propositions believed by others into his own mind. Hence we seem able to attach only a derived meaning to coherence in collective believing. Again even when we take the individual, though, there, believing processes conflict and may be adjusted, it is not as we have seen the believing which determines reality, it only reveals reality; the believing is determined directly or indirectly by the proposition; and thus truth does not owe its existence or character to our believing rightly (unlike the case of practical goodness) but we believe rightly if our believings are directed to the true propositions. Hence it is that we cannot say of empirical propositions that they must be true because we cannot think their opposites. We can only do this when the proposition concerns categorial characters; for these characters of objects are also characters of mental process. It is only in such cases that the attempt to think or conceive (not only to believe) the opposite is impossible.

All this arises from the fact that believing is not practical like conduct. Hence the unwillingness to regard truth or true knowledge as something related with society, obvious as the statement is that truth is acquired by social co-operation. And in fact while morality is in its intrinsic nature social, being the practical wills of persons in society, truth is only correlative with the society of speculative wills, but is itself independent of it. Is not knowledge it may be urged acquired by the *individual* by the process of testing ideas by facts, endeavouring to resolve the contradictions of experience? Would the belief of a multitude make a hallucination any the less so?[2] Some explanation seems necessary in the light of such questions to justify us in regarding truth as what is believed by collective speculation and in treating the individual speculation as the reflexion of the collective.

(1) The beliefs of an individual are only a small portion

[1] On the other hand a practical judgment in one person does or may conflict with a practical judgment in another person, just because it is practical willing. When Sidgwick (*Methods of Ethics*, I., iii.), in maintaining that the objectivity of moral judgments must belong to Reason and cannot be founded on feeling, urges that if I say Truth should be spoken and you say Truth should not be spoken, we should have "two co-existent facts stated in two mutually contradictory propositions" (ed. 6, p. 27), he is treating the practical judgment as if it were merely a speculative act or belief.

[2] *Cp.* J. Dewey, *Studies in Logical Theory*, pp. 24, 82.

of reality in any subject matter. The individual seeking coherence in his believings finds that other beliefs are entertained by his fellows, and these being objective can be brought before his notice and provoke in him fresh believings to be integrated with those which he already possesses. It is his social character working in a certain practical direction which drives him to combine his own and other beliefs into one. For the speculative impulse is itself a practical one, an instinct of curiosity, and he is restless till he satisfies it by learning from others because in this way he gets their acknowledgment. It is by this mutual acknowledgment of one another in seeking to know things that two persons become aware of one another as not only having beliefs, but as believing. Consequently there is adjustment of believings between A. and B. through their common practical pursuit of knowledge and in this way only. Thus A.'s believings are in this way like his moral sentiments a reflexion or representative in his mind of the common stock, and not only are his moral beliefs but his speculative mind social in their nature. Scientific method arms him with the means of avoiding error in his own case and comprehending other views than his own of things. It is thus true that while reality is independent of our inquiry into it, by virtue of which it is revealed, it is true or knowledge in the proper sense in relation to the collective speculation which believes it.

(2) The objection that knowledge consists in the process of testing ideas by facts to find if they work is the pragmatist conception of knowledge and the answer to it is deferred to a later section (§ 14). It undoubtedly describes the process of obtaining knowledge, but interprets it in my opinion erroneously.

(3) It follows from the above statement in (1) that the reference to hallucinations is irrelevant. If the whole world could retain a hallucination, the world would certainly hold that objective experience for reality. You answer it would still not be true and those who believed it would perish. But just because this is the case, collective hallucination in the complete form is impossible and would be extinguished by selection. A hallucination is shown to be such by its incoherence with other experience.

(4) The question might be raised, could not then a solitary individual know truth? In the sphere of practice he could not be moral, but at most prudent. He could refrain from food which caused him indigestion; but he could not understand that it was *right* or a duty to be prudent. The parallel

question in knowledge is more difficult to answer. As things are, the individual does in solitude discover truth, but he does so by following the methods of collective truth-seeking, which are called scientific methods, and he carries with him the presupposition of a reality in which he has no monopoly. He is merely an intellectual Robinson Crusoe with scientific traditions. The great discoverer is the fortunate individual who possesses by gift of nature the eyes which enable him to see what others cannot see for themselves but can be brought to see when it is pointed out to them. But it is scientific training or scientific reflection which in part has armed his eyes with instruments. The solitary individual we are imagining is without fellows and without traditions. If he were so gifted as to be in all respects perfectly normal, without idiosyncrasy of sense or intelligence or emotion, he might seem at first sight to be in possession of truth. But for him the distinction of mere objectivity and reality would not arise, and he could not have truth because he could not be a prey to error. Let us neglect a monster such as this who is fantastic because he is free from the defects which require the help of others in attaining truth. But even of an ordinary imperfect individual we can say, hard as the saying may seem, that for him, if he were really a solitary, reality and truth would be unmeaning expressions. He could indeed distinguish between things as they are and as he believed them to be; he could discover that he could not light a fire in the rain; or climbing yonder tree, which he takes to be fifty feet high, might find himself after thirty feet at the top and in danger of a fall.[1] He could have what might be called prudential truth, and (but that the phrase is question-begging) could be said to be in presence of a pragmatic reality.[2] But he would not have truth, again because he would not have error. His so-called 'errors' would be misadventures of faith. They would not be real errors. He would never *be* in error but only *have been*. His 'errors' would be all in the past. For an error is a false belief or proposition, and for the mere individual it is annihilated in contact with the proposition which he retains as his belief. But an error is not such because it was false then, when it was believed, it is false now or irrespective of the time it was believed. It is something

[1] This does not affect the description above of discovering *truth* by experiment, though it might seem that we were claiming there that the individual discovers truth by experiment and are here denying it; for there the individual considered is not a mere individual, but is a member of a society of speculative wills.

[2] See later § 14 where the same subject is returned to.

believed by one, which is disbelieved by the collective. And, indeed, in our ordinary use of the word, we say to another person 'You are in error,' but we do not ordinarily say of ourselves 'I am in error,' but only 'I was in error'. We are able to do so with propriety because we mean that the proposition which we believed then is false and is discovered to be so by the collective speculative will, which we represent. But the *mere* individual cannot have error because there is no one else to adjudge it so; and if he were to say he was in *error* in the past, he is treating himself as another individual and introducing the notion of a society within himself, a notion for which he would have no warrant in the absence of the experience of other selves.

Truth thus we may conclude is coherent beliefs, with correspondent coherence both in the collective speculative will and in the individual, which is the mirror or counterpart of the collective will.

7. *The Science of Truth.*—The science of truth, if that high-sounding phrase may be used, is partly the inquiry into what truth in the abstract is, and so far it is a part of metaphysics. But the larger part of it is Logic, which is thus parallel with Ethics. Just as in practice, coherent willing submits to the limits of social welfare, so truth consists of propositions cohering in certain ways determined by real existence. Now it is the special sciences themselves which inform us in detail what the coherent propositions are in their respective provinces. But propositions are not simply related to each other in their material character, in virtue of their subject matter, but they possess certain formal characters, and exhibit formal coherences more concrete than the mere form of coherence itself. This is best explained by an illustration. The fall of the stone to the ground and the attraction of the planets to the sun cohere as obedient to one material law. But these truths are not merely propositions about stones which fall and planets which bend towards the Sun, but they are propositions. Now it is the coherence of truths in their propositional character that Logic investigates. Besides the special sciences there is thus another science which inquires what propositions, *qua* propositions, are connected with what others; and as a preliminary to this what distinctions there are of a formal propositional character in real existence. The answers to these questions involve a statement of the kinds of propositions, and their relation to one another in inference.[1] Thus whereas Ethics is a mental

[1] As in Mr. Bosanquet's *Logic*.

science dealing primarily with the conduct of persons, Logic is not as such a mental science, and is only concerned with mind so far as the truths it deals with may be some of them mental, truths of mind as is presently to be explained. It deals with real relations of a certain sort amongst propositions. It describes the conditions which they must conform to, so as to secure coherence and avoid error. In doing so, it of course also describes the rules which *we* must follow in order to discover coherence. But these methods of science are not themselves determined by our minds, but by the nature of reality in its propositional character. A method that is a method of proof (not of discovery) means, when you consider it in its essence, a certain relation among propositions in virtue of which, certain propositions being given, another may properly, that is coherently, be inferred; and it is altogether to be distinguished from the practical devices we may use, or the mental attitudes we may adopt in discovering such proof. Though the psychology of the process by which coherence in beliefs is discovered, that is the psychology of how intersubjective agreement is secured and coherence established within the reasoners' minds, may be expected to provide all manner of clues to understanding the conditions of propositional coherence, Logic is not a department of Psychology, but seeks those conditions of coherence in the world of real existence as such. Our mental attitudes in discovering truth do not enter into the conditions of truth, though they may point us the way to discovering them more easily. Thus to take one illustration, we cannot say that a negative proposition is in part subjective, on the ground that the subject rejects a predicate suggested by ourselves; the rejection lies in the character of the matter. On the other hand, to realise that it involves upon the side of believing a veto of the speculative will enables us the better to understand what the meaning of the correspondent belief or proposition is.

Neither are we entitled to say, as some have wished, that logic is a department of psychology, because ultimately what propositions are consistent with each other must depend on a mental capacity or compulsion to combine them; or what propositions are inconsistent depends on a mental incapacity to combine them. For instance that contradictory propositions cannot both be true because we are physically (psychologically) unable to think them together. That we cannot thus think them together is merely the special case of the working of the law of contradiction as between two mental propositions. The mental conflict enables us to understand the correspond-

ing conflict between the non-mental propositions, but it is not the foundation of that conflict. The law of contradiction includes contradiction between propositions in the non-mental world and propositions in mind alike. To suppose that logical laws are the outcome or the expression of mental assents or refusals is to treat truth as a mental creation, instead of a system of propositional facts, or relations between things whether these things are mental or non-mental. But this remark implies the existence of mental propositions, which we now proceed to discuss.[1]

8. *Mental propositions.*—Hitherto we have for simplicity's sake passed over the propositions about mind, and we must

[1] For the view of Logic taken here *cp. New Realism* (W. P. Montague, p. 261); and for the non-psychological character of Logic compare E. Husserl (*Logische Untersuchungen*, vol. i., Hamburg, 1900-1).

Prof. Husserl, whose important work I have to confess I have only now made acquaintance with, since this paper was first drafted, condemns any attempt to regard logic as a science of realities as absurd (*widersinnig*); but I retain it in spite of the misgivings which such censure causes me. What I call the propositional character of propositions he calls their categorial form (his use of the word categorial is different from mine) and he denies the categorial form to be real. It belongs not to real (*i.e.* sensible) things but is a kind of objectivity given in the logical acts themselves (ii., p. 618), "all categorial form lies in logical acts in the sense of intentions (*i.e.* objective reference)" (for the whole subject see ii., VI., c. vi., pp. 600 ff.). Logic thus has a sphere of its own independent of the matter of perception. Even the 'is' of the copula being categorial form is not real. (Herr Husserl refers to Kant who said that *sein* was not a real predicate. But Kant also said that the copula was the sign of objectivity, and this I take to be sufficient.) Now it must be admitted that the so-called relation of subject and predicate does not belong as such to reality. It concerns the act of asserting, not the assertion itself; and it concerns also the expression of the act of asserting in words. It is of itself either a psychological or a grammatical distinction. Reality contains no subjects and predicates, though it contains what is the occasion for the distinction. The subject-predicate relation is not the same as the relations which in my view are the real objects contained in a proposition, that of substance and attribute, or cause and effect (ground and consequent), particular and universal, time and space, etc., as the case may be: *e.g.* lions are carnivorous, lions live by eating flesh, lions are carnivores, lions inhabit the jungle. It is because of the real relations contained in the assertion (= that which is asserted) that we can attach a real meaning to immediate inferences, in which a real situation is asserted from different points of view with differences in subject and predicate (All S is P, and Some P is S). The "categorial form" therefore, in my view, always refers to real situations. But then "real" does not mean for me only sensible, but the objective whole in which sensible and thought elements are brought into coherence. Doubtless propositions are not percepts, but they belong to one reality with them and unfold their nature more fully. Doubtless too we can combine propositions and trace implications irrespective of perception; but we are still dealing with aspects of a real world; just as we can follow a train of images and still these images are aspects of real things.

now include them. Two different questions may be asked. (1) How can there be mental propositions at all, consistently with our previous account of propositions? (2) Granted that there are such, how can there be a science of them?

(1) According to the view taken of the relation of willing to its cognitum, the object of will is a proposition, whether the will be practical or the speculative act of judging the same object. It might seem therefore that if there are mental propositions they are the objects of fresh acts of judging, or if not, that their existence is inconsistent with our view of speculative willing. But in fact in maintaining that willing has propositions for its objects, we do not imply that there are no propositions which are not objects at all. There are in fact enjoyed as well as contemplated propositions, and the one are as much real existences as the other. It is indeed implied in the analysis of experience into enjoyment and the contemplated object that both equally are or lay claim to be real existences. Now whenever we judge, the judging is an actually existing event, which is not contemplated but enjoyed. And the judging or believing has propositional character just as the belief which is its object has; (for it may be added there never is a believing without a contemplated belief). Take for example such cases as I feel cold, or I believe that water boils at 212°. The judging, I feel cold, is a different enjoyment from sensing or perceiving cold, which is not expressed by a sentence but by an interjection or even a shiver. And these judgings are propositional: I enjoy the act of speculative will by which I (my subject) is realised as qualified by the process described as having the idea of cold, or the perceiving of boiling water is realised (of course within myself) as qualified by the conceiving of a certain degree of temperature. Other instances are the acts of judging that heat causes wax to melt, that breakfast came before lunch, that Edinburgh is north of London, or the more complex instance that thinking of Herbert Spencer makes me think of Brighton. It is enough to indicate that in all such cases we enjoy a propositional experience of a specific character. What the precise specific character is (judgment of recognition, causality, etc.), and what the relation is between the specific propositional character of the believing and the specific propositional character of the belief, is a more difficult question which we need not raise.

Thus there are propositions in the world which are not objects of speculative will but are contents of it in the strict sense of that term, that it is made of them. And with this we might legitimately pass on to the second question of the

possibility of a science of mental facts. But it is well to meet explicitly the general objection that in describing our mental states, I am cold or I believe so and so, we are really making them our objects of contemplation; and that in particular in all psychological observation we do so. The answer is that psychological introspection is indeed properly called observation, but that there is no difference in kind between it and simple observation such as, I am cold, only that it is carried out with greater refinement, and observation of its subject matter in relation to other mental facts.[1] In both cases I am reporting my judging act in words. If then in direct psychological observation I never make my mind an object, still less do I do so in the mere declaration that I am cold or believe so and so. The difference between such cases and psychological introspection is one of interest. For the most part when I say, I am cold, I have a practical interest: I may mean, bring coals. In the other case my interest is theoretical or purely speculative. This means that under the spur of curiosity (a practical instinct whose end is attained by more elaborate speculation) our enjoyments become related to one another and are enjoyed in this relation. Thus I never in self-examination attempt to perform the impossible feat of turning my mind upon a part of itself to contemplate it, and as it were convert it for the time into a piece of the not-self. All that I do in the most elaborate and refined self-inquiry is to enjoy one act of myself in its connexion with and as a part of a larger system of enjoyments.

To understand this better, let us turn to the examination of external objects. I perceive a flower; I judge it to be a rose. Here are external objects, the one a thing, the other a proposition. There may be a proposition about a proposition, as when I say that the fact that there were germs in water in a town produced an outbreak of cholera. Here my object is a relation between propositions. In making a proposition about another proposition, I do not make the second the object of my proposition, I include it in a more comprehensive one. I may even make the proposition that a proposition is true, meaning that it is congruous with all propositions. I may go on indefinitely making propositions about propositions (the fact that the fact that A is B, is C, is D, and so on) so long as I am bringing propositions into closer degrees of intimacy within a system of objective existence.[2]

[1] *Cp.* on this Macdougall's *Psychology; the Science of Behaviour*, ch. ii. Titchener, *Text Book of Psychology*, §§ 5, 6. See also *Proc. Aristot. Society*, vol. ix., 1908-9, 'Mental Activity,' etc., pp. 29-32.

[2] Observe I do not say that secondary propositions are necessarily propositions about propositions. On the contrary they may be about assump-

But the process has a limit. I cannot significantly say that it is true that a proposition is true for this is mere repetition and there is thus no infinite regress.

What we find here in the world of contemplated objects, we find also in the world of enjoyments. My speculative instinct is satisfied here by mental existences and not extra-mental ones. My enjoyments became related to one another but are not contemplated as objects. My perceiving becomes more accurate and detailed when I perceive carefully, just as the object throws up new features under a lens or the microscope. But I do not perceive my perceiving nor judge my judging. I may judge my perceiving as when I say I am cold; and I may make a judgment about my judging, as when I say that in believing so and so I was clouded by prejudice. But in doing so I no more contemplate the judging about which I judge, than I make a proposition about external things the object of another proposition. I simply include the one enjoyment in a more extended enjoyment, of which it forms an ingredient. This process of relation of judgings within the whole may go on indefinitely, as is the other case, with the same limitation that we cannot judge the whole.

Finally, just as I can make external judgments about past, present and future, and I can discover generalities in the external world; so I can enjoy my own past, present and future, and enjoy generalities (universal propositions) respecting myself. For example, without objectifying the process of association, I can discover general laws of association. Doubtless great difficulties are raised in this connexion by the paradox of the experience of myself in time, that any experience of myself beyond the present moment exists at the present moment. But there is a clear difference in the content of all such propositions from propositions about my present as such. I feel cross, is a proposition about my present; I felt cross yesterday, is a proposition about my past. Although for an outside observer it is an event occurring at the moment when the judgment is made, it is experienced by me (enjoyed by me) as belonging to my past; while at the same time it is or may be experienced by me in continuous connexion with my experienced present, as when

tions, as Prof. Meinong has shown (*Über Annahmen*, ch. iii., ed. 2, and elsewhere). *E.g.* That Cæsar should have failed to cross the Rubicon would have been disastrous to his career. Or I maintain that the earth is round, where if the primary statement, the earth is round, were a full proposition, the secondary proposition would be tautologous; as indeed in some cases it is.

I say I remember now how cross I was yesterday, where the continuity of my past with my present (as experienced in my present condition of recollection) is indicated in the judgment. Similarly the universal judgment, whenever I want to rise much before breakfast time, I feel cross, occurs as an event in the present moment, but it is experienced about no particular time, past, present or future. These facts, difficult as are the questions which they raise, can barely be noted here as facts, with which a theory of time has to deal.[1] So far as they concern us here, they confirm the statement that propositions about my own mind, and *a fortiori* about yours are not the objects but the actual contents or substance of mental propositions.

One and perhaps the main reason for the belief that to observe a state of mind we make it an object, just in the same sense as we make an external thing an object, is to be found in the use of language to express our observation. Since the speculative interest in external things is earlier than that in mind, language has been developed largely though not wholly in connexion with external things. And to a great extent (apart from the emotions) we have to describe our enjoyments when we describe them scientifically in words borrowed from the description of the outside world. Moreover the words we use are themselves external objects. How easy then to imagine that because I contemplate them I also contemplate the mental state which they express. But in fact words are but gestures, like the frown of annoyance or the shiver of cold. They express enjoyments and refer to objects, and being themselves objects they help us to think because they fix our attention. But it no more follows that, because in judging that I am angry I use a sentence, I therefore am making my anger or my judging an object, than it follows that when I make the gesture of shivering, which I contemplate, I am making the feeling cold an object of internal, objective contemplation. And yet the shiver describes my feeling, just as the sentence does, though not so fully.[2]

9. *Truth of mental propositions.—Mental Science.*—(2) A far

[1] They may partly serve as a clue to the real nature of time both as it is in myself and as it is in non-mental objects.

[2] I am sensible of the inconvenience of the use of the word object to describe exclusively contemplated objects; especially as it prevents me from saying as I should like to do that enjoyments, like contemplated objects, are objective (though not necessarily true or real). But if I spoke of enjoyed and contemplated objects indifferently, there would be sure to result confusion, and the distinction of the two kinds of objects in their relation to experience would be blotted out. Some technical term seems to be wanted which I have not skill to invent.

more puzzling question is the second of those we raised as to mental propositions, how they can be true or how there can be science of them. For in themselves they are enjoyments: are directly incommunicable from one mind to another. How then can they constitute a science, of which the distinctive character was that at any rate when it concerned external things, it implied collective speculative will? The subject has been already touched upon (too lightly) when we endeavoured to explain how the individual believer could be said to represent the community of believers, through the adjustment of the believings in different minds. The answer is that the possibility of a mental science (take the simplest one psychology) depends, on the mutual acknowledgment by persons of each others' enjoyments; or to put it otherwise, the growth of mental science is part of the process of mutual acknowledgment. In practical conduct these acknowledgments were, as we saw, a fulfilment of the social instinct. But the speculative instinct seeks the co-operation of others, because one man finds that his store of objects of contemplation is enlarged by the objects which other persons bring before his mind. Not only do they supply him with new objects, but with objects not totally new but corrective of his familiar objects. But when we have once acquired a speculative interest in our own mind, our mental enjoyments are enhanced, enlarged, and clarified by acknowledgment of the enjoyments of others. And the reverse is also true that in acknowledging others as minds we may have forced upon our attention the enjoyments of others and so be led to inquire into our own minds. Thus what we may principally learn from another person engaged with us about the same objects or in the same occupation, may be not so much how the objects present themselves to him, but how he hates or loves them; and this may turn our attention to our own feelings in which we may have felt as yet none but a practical interest. Hence as I supplement external beliefs by including the beliefs of others, so I can supplement my internal believings by reference to others' enjoyments as acknowledged by me. And to repeat once more what has been said or implied, these interrelations between minds are reciprocal. The passion for knowledge in which others can help us increases the extent of our acknowledgments, that is makes us enter more largely into sympathy with their enjoyments, and this in its turn increases the passion for co-operation in knowledge; and again the more we understand our own enjoyments the more we acknowledge theirs, and the more we understand theirs the better

we are able to understand our own; so that the correction of our judgment of ourselves proceeds *pari passu* with the inclusion of them. The methods by which in perfecting the mutual acknowledgment I arrive at sympathetic comprehension of another's mind are various. Most largely they depend upon his own description of his enjoyments. Partly also, though this is in the later stages of the science, I observe his beliefs (what Mr. Stout calls his presented objects) and conclude from them to his mental state by the analogy of my own experience.

In some such way as this we arrive at the science of enjoyments, not merely of my own enjoyments but of enjoyments as experienced by many. Such a science is not the same kind of science as that of external nature or generally non-mental reality; but it is not the less science. For what is science? It would be inconsistent with verbal usage to say that a science is an ordered grouping of propositions or facts obtaining in some sphere of reality; because when we speak of science we commonly include also its relation to the discovering or the possessing mind. To possess a science, *e.g.* physics, is in the common usage of the words to contemplate or have the habit of contemplating the physical world (things in their physical properties) as thus ordered. But nothing should blind us to the truth that apart from the mere registration of science in books, the knowledge which constitutes a science like physics is nothing but the actual physical world as more fully revealed to us than to ordinary observation, in all its real details and interrelations, as they are contained in propositions, singular and universal.[1] This statement is not open to the obvious but frivolous objection that he who possesses physical science would on this showing carry the physical world in its orderly arrangement about with him. It means only that he is compresent with that ordered physical world.

Precisely in the same way the science of mind consists of ordered facts of mental existence, as contained in mental propositions; and to possess such science is to be aware of such mental propositions as we enjoy them in ourselves directly and in others by acknowledgment. The difference

[1] Prof. Lloyd Morgan has a passage admirable in most respects in his *Instinct and Experience* (1912), pp. 146 ff., in which he compares the universals of thought to maps of a country, which omit details in order to help us to find our way. Such maps, he says, are our ideal constructions in science. I have only one criticism of this, which concerns the scale. If science is to be a map, the map must be like the new one invented by the professor in Lewis Carroll's *Sylvie and Bruno*, "on the scale of a mile to a mile".

between mental science and the external or non-mental sciences is that, the subject-matter of the non-mental sciences being contemplated, it can (to speak theoretically or ideally) be contemplated equally in all its parts by any one individual. But enjoyments are not open to our inspection, except they are our own, because we are not as the angels and cannot contemplate enjoyments at all, and can even enjoy only our own. Hence in certain respects the range of our science is limited to coordinating the propositions we ourselves enjoy. But it has been shown above how knowledge of truth depends on the acknowledgments of other minds and how through such acknowledgement we can establish the fact that different minds behave in the same ways. The limitations of psychology are thus not due to defective science but to the character of the real existences with which the science is concerned. It would be considered strange to deny the name of science to the study of foraminifera, because these creatures have not the same powers as monkeys. Enjoying beings treated as individuals (and psychology treats them so) are related to one another only through mutual acknowledgments. But it is just because it faithfully represents such beings in their own internal relations and in such limited relations to other enjoying beings that it claims to be a science. It represents minds as they really are in themselves and in their likenesses and unlikenesses to one another, just so far as likeness or unlikeness exists between incommunicable centres of enjoyment. And so far is it from being true that we cannot have science of our minds that those very categorial characters which are the fundamental ones in all existence mental and non-mental alike, are more easily described as they exist in mental existences than in non-mental existences. The character of science is as various as the subjects with which it is concerned. It is only a prejudice which is responsible for denying to psychology (or other mental science) the name of science: the prejudice that science must be all of one sort, must deal only with contemplated propositions. That prejudice disappears on reflecting that a science is a system of real existences revealed in interrelated propositional facts, and that this is equally true whether those facts are physical and contemplated or mental and enjoyed.

Such is the justification for regarding psychology (with which in this section we have been mainly concerned) as a science—as a system of ordered mental propositions, which can only be enjoyed, but which can be and are enjoyed "collectively" in the sense of that term which in this case

is from the nature of the subject legitimate and satisfying. But Psychology is not the only science of mind. It is concerned with the individual mind as such, and no matter how much the individual enters into relations with other individuals, it describes only the enjoyment of such relations in the individual. On the other hand Ethics deals with minds in their practical inter-individual or social conflicts and co-operations. Such inter-individual relations of minds are possible because they arise out of practical conduct in which persons affect each other in altering the world upon which they react. The mental propositions of Ethics all have reference to such interaction. Ethics is thus the systematic ordering of propositions, which may be described variously as declaring that such and such satisfactions are good, that such and such conduct is right, that such and such objects are worthy, or as embodying collective approvals. However described they are in the end mental propositions. Ethics is in fact the science of practical acknowledgments, the acknowledgments themselves (not mental process as such), becoming in its turn the subject matter of a science which while mental is thus normative. Its concernment with mental existence it shares with Psychology. As mental it is contrasted with Logic, which has no special concern with mind. But its more precise relation to Logic and truth as well as to Æsthetics and beauty is reserved for later sections (11 and 12).

(*To be continued.*)

III.—ALCHEMY AND THE ABSOLUTE.

By M. M. Pattison Muir.

The more one studies any branch of natural science the more one realises that all scientific knowledge is inside experience. But there have been times in the history of the sciences when those who sought knowledge of natural events were sure that the only way to attain that knowledge was to pass outside experience, to lay hold of ultimate reality, and to return with that talisman into experience.

The pragmatic philosopher is convinced that, as William James says: "Though one part of our experience may lean upon another part to make it what it is in any one of several aspects in which it may be considered, experience as a whole is self-containing and leans on nothing". But the absolutist philosophers are quite certain that external events are but bubbles and froth on the stream of truth, are only the "accidental and confused setting" of genuine knowledge, which ought to be concerned solely with *The Truth*.

The alchemists were the most patient and thorough-going pursuers of absolute truth who have appeared among those who profess themselves scientific investigators. It cannot but be interesting to compare the aim, the method, and the phraseology of the alchemists, with the aim, the method, and certain technical expressions of the absolutist philosophers.

The alchemists asserted that the nature of ultimate reality could be found by the human mind. They began by claiming a knowledge of the degrees of nobleness, and the degrees of degradation, in the scale of being. They said that everything has a natural or proper form which essentially belongs to it, and that when anything is taken out of its proper form, it is in a violent or non-natural state. They declared that everything which has been taken away from its natural state tries to return to that state. Metals are found in the earth; they rust when brought above the ground. Hence, the alchemist said, metals are corrupted, degraded in the scale of being, when they are taken out of the earth. But some metals, notably gold, do not rust in the air; therefore, the alchemical

argument ran, these metals are more noble than the baser metals which rust in the air. The alchemists were very jealous protectors of the nobility of metals; they would not allow them to be thought inferior to plants. Noticing that plants perpetuate themselves by seeds, the alchemists concluded that metals too are endowed with this power, that metals grow from their own seed which they sow in the earth. An alchemical writer indignantly protests: "What prerogative have vegetables above metals, that God should give seed to the one and withhold it from the other? Are not metals as much in His sight as trees?"

Knowing, as they assumed they knew, that gold is nobler than iron, and knowing also that iron, like other metals, is trying to attain its natural, proper place, is trying to become gold, the alchemist made it his business to help iron, and the other base metals, in their praiseworthy efforts to raise themselves from a more degraded to a less degraded position in the scale of being. They said that there is a something in every base metal which may be educated, developed, strengthened, by alchemic art, until the transmutation is finished. This something was often spoken of by the alchemists as "the Mercury of the base metals," sometimes as "the golden nature which the baser metals possess". By calling it Mercury, the adepts led astray the feebler, matter-of-fact seekers of alchemical truth; for these men wasted their energy on vain endeavours to compel the ordinary, material mercury to become gold; whereas the initiated meant by Mercury a semi-spiritual, indefinable essence which could be reached only by tearing away the outer coverings of gross, material substance that hid the essence from the view of the vulgar.

So far the alchemists were working with intellectual concepts: the concept that everything has a natural state which it strives to retain, and to return to if it be removed therefrom; the concept that all things are ordered in a definite hierarchy of nobleness, arranged to give satisfaction to the intellect of the alchemist; the concept that this hierarchy is ordered and maintained by the presence in the members of it of different degrees of the binding unity called by alchemists *The Universal Essence;* and the concept that many of the things which are lower in the scale of nobleness can be raised by alchemical art, working in conformity with the design of nature, which design was known to the alchemists. Not one of these concepts was derived from, or rested on, perceptual experience.

The alchemist was always a practical man as well as a dreamer. It was imperative that he should use his con-

cepts in the laboratory. He was obliged to work under the conditions imposed on him by the resources of his workshop. But before entering his laboratory he had formed his plan of action, a plan which merely tried to translate his concepts into sensible experiences—for his concepts were more real to him than the experiences of the laboratory—not a plan that began with sensible experiences and symbolised and correlated these by conceptions arising from the study of the related experiences. The alchemist sought laboratory methods which were at once natural and transcending nature; for he was trying to pass outside human experience, and at the same time trying to bring the results of his adventure back with him into human experience. The alchemist was saved from becoming merely an absolutist philosopher by his endeavours to translate his intellectual concepts into the terms of sensible experience. Alchemical experiments brought to light many physical and chemical facts which have been of service in the advancement of natural science, and have led to discoveries of much importance to the chemical arts. But these experiments did little to strengthen the alchemical conceptions which it was hoped they would make more convincing. Finding that the results of their experiments refused to agree with their mentally constructed scheme, the alchemists put ever more stress on their ideal order of nature, and forced their experimental results to conform to that order. They sank deeper and deeper into the morass of vicious intellectualism. They used their sensible experiences as symbols of, and guides to, hazy conceptual experiences. They placed reality in the mind, and tested the truth of experimentally determined facts by the slightness of the resistance which they offered to the filling in of the details of the mental picture which had been formed before appeal was made to the laboratory. The alchemists tried to let down their intellectual conception of an order-seeking world on to a foundation of sensible experiences. As the building wobbled, the foundation was rebuilt; the sensible experiences were forced to fit into the intellectual conception, and were then treated as supporters of that conception.

The alchemists were convinced that metals can be transmuted; it was, therefore, easy for them to transmute their particular sensible experiences into harmony with their intellectual scheme, and then to use these transmuted experiences as supporters of that scheme. It was this semi-material, semi-intellectual transmutation that gave to the alchemical experiments all the value that the makers of them thought they possessed. The experimental results were not exactly

falsified, nor were they ignored; they were constantly appealed to as supporters of the intellectual scheme. The most correct description of the process to which these sensible experiences were subjected is to call it a transmutation. For the alchemists insisted that the art of transmutation consists in removing the outer coverings which hide the inner Mercury or golden nature of metals, and stop its activity, and by so giving freedom to the proper nature of the metals, allowing them to reach their natural destination. that is, to become gold. The alchemists constantly asserted that every transmutation must begin in a destruction of what is unessential in the thing to be transmuted; they being the judges of what is essential and what is superficial. As the field of ripe corn is produced by burying the seed in the earth and there leaving it, apparently to die, and to be brought to life again under the influence of the sunshine and the rain; so must the outer husk of a transmutable thing be destroyed, and the inner essence must then be revived, and nourished to new life by the influence of the great agent of transmutation which the alchemists called the Philosopher's Stone, an agent which was able both to kill the husk and to vivify the kernel. It was thus that they transmuted the results they obtained in their laboratories. What their intellectual idea of an order-seeking world declared to be unessential in these results, to be only on the surface of them, was set aside; what remained was encouraged to grow strong by the nourishment given it by the alchemical conception of vivifying unity which acted through and by means of the Philosopher's Stone.

When the experiences of the laboratory had been thus transmuted they became valuable, they became supports, inside experience, of the conception which claimed to pass outside experience. The all-embracing conception must have the appearance of resting, primarily, in human experience. Experiences rebelled against acting as foundations for the conception of the *Universal Essence;* therefore experiences were changed; the transmutation was effected in the sphere embraced by the conception of *The One Thing;* and the transmuted experiences were now content to make believe they were acting as the foundation-stones of the intellectual edifice.

The nature of transmutation can be described only by using allegories, symbols, and parables; whether it be the transmutation of base metals into gold, or the change effected in laboratory experiences to make them into the gold used in adorning the alchemical temple dedicated to the Universal Essence. Similarly, the great instrument of transmutation, the Philosopher's Stone, is generally described by giving to

it contrary properties. "Our Stone may be compared to all things in the world. In its origin and sublimation, and in the conjunction of its elements, there are analogies to things heavenly, earthly and infernal, to the corporeal and the incorporeal, to things corruptible and incorruptible, visible and invisible, to spirit, soul and body, . . . to the creation of the world, . . . to all animals, vegetables and minerals, . . . to unity and multitude, . . . to actuality and potentiality, . . . to male and female, . . . to the vigorous and the weak, to peace and war, to white and red, and all colours, to the beauty of Paradise, to the terrors of the infernal abyss." The conception of *The Universal Essence*, transcending human experience, stretched into human experience this semi-conceptual, semi-perceptual instrument, hoping, by the changes which that instrument produced, to strengthen its own claim to be regarded as ultimate reality. The instrument, like the conception of the Universal Essence, owed whatever success attended its use to its extraordinary flexibility. No two alchemists agreed about its origin, use, or ways of working. It was all things to all men. It presented an aspect of itself to each who sought it which was enough to satisfy the intellect of the individual seeker.

Students of the natural sciences have wholly and utterly rejected the alchemists' claim that intellectually constructed concepts are ends in themselves, and the experiences of the laboratory and the field are instruments for producing results which may be transmuted so as to give support to concepts that, when untransmuted, they destroy.

There is a school of philosophers whose aim and method are very like the aim and the method of the alchemists. The intellectualistic, or absolutist philosophers do not use concepts as instruments for gaining knowledge about sensible experiences, but as realities, the knowledge of which is gained, in part, by transmuting sensible experiences, and is the only knowledge worth having.

Like the alchemists, the intellectualistic philosophers have an order of nobleness wherein they arrange the parts of experience. One of them assures us that: "Comparative ability to exist, individually and as such, within the sphere of sense, is a sign everywhere, so far as it goes, of degradation in the scale of being". The alchemists constantly expressed themselves to much the same effect as Mr. Bradley does in this sentence quoted from his book *Appearance and Reality*. Thus, an early alchemist said: "It is necessary to deprive matter of its qualities in order to draw out its soul". Paracelsus taught that: "Nothing of true value is located

in the body of a substance"—that is, its ability to exist, individually and as such, within the sphere of sense—"but in the virtue . . . the less there is of body the more in proportion is the virtue". Basil Valentine said: "Fire is the purest and noblest of all Elements".

The intellectualistic philosophers have a much lower opinion than the alchemists had of what one of the philosophers calls those "irrelevant appeals to practical results which are allowed to make themselves heard". The alchemists amassed many useful facts by working hard among sensible experiences. The philosophers of the intellectualistic school treat human experiences as unreal, as "the accidental and confused setting" in which truth is unfortunately encased, as "bubbles on the uniform and timeless stream of knowledge". Of all those foolish experiences, which create "a passing show of arbitrary variation," one of these philosophers (Mr. Joachim) says: "They themselves, and the manner of their connexion are excluded from the theory of knowledge". The alchemists tried to set free the Essence from the "corporeal poison" of particular qualities. Another philosopher of this school, recognising that a theory of human knowledge can hardly exclude from its survey all human experience, makes much use of the alchemical doctrine of transmutation. The alchemists spoke of their vision of intellectual harmony as *The One Thing;* the philosophers call their very similar vision *The Absolute.* As the alchemists taught that *The One Thing* was able to destroy particular kinds of substances, and then to "change the lifeless remains into a new and pure body," so Mr. Bradley affirms of The Absolute, that it is "the unity in which all things, coming together, are transmuted, in which they are changed all alike, though not changed equally". This is the genuine alchemical voice. "The unity in which all things, coming together, are transmuted," is the same concept as "the one Magistery of alchemy". In the unity "all things are changed alike, though not changed equally"; the "one Magistery," we are told, "hardens that which is soft, and softens that which is hard, fixes that which is fugitive, and glorifies them all with its own magnificent brilliancy and splendour". The Magistery changes all these things alike, though not equally. "Know, brother," an alchemist explains, "that our whole Magistery is one Stone, which becomes several things, and yet again is restored to its unity." Speaking again of the Absolute, Mr. Bradley tells us that it "has no assets beyond appearances; and again, with appearances only to its credit, the Absolute would be bankrupt. All of

these are worthless apart from transmutation." To transmute appearances, to remove from them what conceals their true meaning, and so to make them valuable, was declared by the alchemists to be the very essence of their art. Paracelsus said: "To grasp the invisible elements, to attract them by their material correspondences, to control, purify, and transform them by the living power of the Spirit—this is true Alchemy". The same alchemist declared that: "Destruction perfects that which is good; for the good cannot appear on account of that which conceals it". Another alchemist taught that in all substances is hidden "a central fire," which is "in a state of passivity during the life of the substances"; and that the business of alchemy is to kill the substances, because only thus can the "hidden central fire obtain the mastery, and attract to itself all the pure elements, which are thus separated from the impure, and form the nucleus of a far purer form of life". Another alchemist speaks of "That Spirit which permeates all creation —yet is everywhere bound up with the defilements and dross of matter". He assures us that, "if freed from this dross, it returns to the purity of its substance, in which it produces everything, and becomes everything in every form".

The alchemical conception of *The Universal Essence*, and that of the medium—the Philosopher's Stone—whereby that conception was brought into active, transmuting contact with the sensible experiences of the laboratory, were declared to satisfy the intellect of those who used them, and satisfaction of the intellect was accepted as synonymous with truth; for the alchemists asserted that they knew "simplicity to be the seal of truth," and therefore their system was true because it was simple. At the same time, although the general alchemical scheme satisfied the alchemical intellect, both the pure concept—the Essence—and the instrument—the Stone —which were in part conceptual and in part formed by transmuting experiences, presented many aspects, and appealed to the intellect of each individual in a different way. There was "no decisive concensus of opinion on any point of importance" regarding the exact nature of the Essence, or the particular ways of working of the instrument whereby the Essence was applied; as Dr. McTaggart tells us there is "no decisive concensus of opinion on any point of importance" in metaphysics. Nevertheless, the awful aloofness from human affairs of *The One Thing*, and the flexibility and readiness to adapt itself to circumstances of *The Philosopher's Stone* (provided you agreed that "all details are vulgar") so impressed the alchemists that they were able to proclaim

their intellectual satisfaction with both. Their satisfaction was proclaimed most loudly when they were driven almost to despair by the elusiveness of the quest of *The Essence*, and were exhausted by hunting *The Stone* from one hiding place to another. The author of *The Pearl of Great Price* admits that, "The expressions and equivocations, the allegories and metaphors, employed by the Sages create a most serious obstacle in the path of the student. . . . It is often all but impossible to do more than guess at the meaning of the Sages. At times it almost looks as if this Art could be acquired only by the living voice of the Master, or by direct Divine inspiration." Another weary seeker of the Stone exclaims: "This horrid beast has so many names, that unless God direct the searcher it is impossible to distinguish him". And yet, so satisfied were these men that they held the truth, that one of them says: "As for the work itself, it is no way troublesome; a lady may read the 'Arcadia' and at the same time attend this philosophy without disturbing her fancy".

It was necessary that the alchemists should declare their intellectual satisfaction with their conceptions of *The Essence* and *The Stone*, for their whole scheme of things depended on these conceptions. Their experimental results became valuable only when they had been transmuted by the power of these conceptions. Had they become dissatisfied with the conceptions, they would soon have been intellectual bankrupts; and moral and emotional bankrupts too, for their ethics and their æsthetics were indissolubly connected with their intellectual conception of the universe.

As did the alchemists, so do the intellectualistic philosophers. These philosophers proclaim their aim to be the knowledge of the ultimate nature of reality. They endeavour to pass outside human experience; and they hope to do this by using human thought. "The essence of philosophy must be confined to intellectual activity," Mr. Bradley says. *Their* Philosopher's Stone is that "intellectual activity" which, they say, brings their Universal Essence (called by them the Absolute) into transmuting contact with the illusory appearances that, when untransmuted, are valueless, because they refuse to bridge the gulf between themselves and the Universal Idea outside experience.

It would never have done for the alchemists to have ignored the experiences of their laboratories; for their aim was the preparation of an instrument which should transmute these into other experiences, more valuable for the purpose of confirming and controlling the action of the Universal

Essence. That Essence was the intellectual conception which supported them in their mechanical labours, and consoled them in their disappointments. When tempted to lose heart as they pored over their crucibles, that would boil over, and "put their fingers among coals, into clay and filth," that refused to be refined, they gained fresh courage to continue their experiments by saying, each in his own special language, what an intellectualistic philosopher (Mr. Joachim) has said, as he recognised that his theory of truth had suffered shipwreck: "That the truth itself is one and whole and complete, and that all thinking and all experience moves within its recognition and subject to its manifest authority; this I have never doubted".

The alchemical way of expressing this conviction varied; these are examples of it: "The substance of our Art is one, and admits of no variation or substitute". "Nature delights in the same nature, kind in kind, kind overcomes kind, kind contains kind, and yet they are not different kinds, or several, but only one kind, having within itself those properties by which it excels all other things." "In the books of the Sages the impression is conveyed as if there were many substances and many methods, but they only mean different aspects or stages of the same thing."

It would never do for the intellectualists utterly to deny the facts of experience; for their aim is to use these appearances —as they call them—as a bridge whereby they may pass securely over the gulf that separates them from the Absolute Reality outside all experience. They know, by a process which ordinary people cannot call knowledge, that The Reality is there. They have these unsuitable materials, and these only, wherewith to build their bridge. Recognising that there are no materials to be procured elsewhere—"The Absolute has no assets beyond appearances"—and recognising that the materials "as such" won't build the bridge—"With appearances only to its credit, the Absolute would be bankrupt"—the intellectualistic philosophers use the same device as the alchemical practitioners; both find refuge in the blessed word *transmutation*. Wonderful is the power of words. Solomon knew the names of the spirits, and by their names he controlled them. Alchemists and intellectualists know the name of the process, and by uttering the name they control the facts, untamable by all other incantations.

Were a worker in natural science to judge the method of "intellectual activity" by its results, forgetting for a moment that the philosophers deprecate "irrelevant appeals to practi-

cal results," he would be astonished. He would find one of the philosophers (Dr. McTaggart) declaring that, "Science advances by small and frequent additions to a body of generally accepted truths. Metaphysic, by the substitution of one complete system for another." He would find the same philosopher announcing that, "in Metaphysic there is no decisive concensus of opinion on any point of importance," and warning us against seeking help for the guidance of our lives from metaphysics, because if we insisted on having guidance "our moral life would become chaotic"; as an alchemist assures us—"In the books of the Sages the only method that prevails is that of chaos". He would find the same candid teacher asserting that—"in its essence, truth is a timeless, stable state". He would be told by another philosopher of the same school (Mr. Joachim) that: "the truth is—*from the point of view of the human intelligence* —an Ideal, and an Ideal which can never, *as such* or in its completeness, be actual in human experience". Before he had recovered from these shocks he would hear Mr. Bradley saying: "I have assumed that the object of metaphysics is to find a general view which will satisfy the intellect; and I have assumed that whatever succeeds in doing this is real and true, and that whatever fails is neither. This is a doctrine, which so far as I can see, can neither be proved nor questioned." If he were acquainted with alchemical writings he would find in Mr. Bradley's words an echo of such alchemical sayings as this: "The Divine Intelligence has subjected all natural and supernatural phenomena to the rule of certain laws, which laws our reason was created capable of apprehending, and this state of things is the preliminary condition of all Science whatsoever".

The student of natural science is so completely unused to the kind of "intellectual activity" practised by the absolutist philosophers, that for a time he is dumbfounded by sayings such as those I have quoted. He cannot form even the faintest mental picture of a changeless, stable truth, which can never be actual (even with the saving clause, *as such*) in human experience; which, nevertheless, satisfies the intellect, and is thereby proved to be real; which is gained, if it is ever gained, by the process of substituting one complete system for another; about no important portion of which is there any decisive consensus of opinion; which is so ultimate and so stable that the use of it, as it is known (if it is known at all), would make our moral lives chaotic; which would be degraded in the scale of being by the merely practical agreement of any of its devotees.

These are the very contradictions wherein the alchemists revelled.

When one inquires into the working of the one Magistery of the philosophers which they call *intellectual activity*, one finds that, like the one Magistery of the alchemists, it fails to make the transmutation when it is applied to real experiences, and succeeds only when success cannot be tested by any human touchstone. The intellectual activity of the modern alchemists is staggered by the assertion, "Sugar is hard, and white, and sweet". The only instrument they possess for transmuting this single, complex experience into a concept they can understand, insists on producing four concepts, none of which can be connected with any other, and declares that what it has separated no man is able to bring together. But, when the same instrument is applied to the series of concepts, "Truth is a timeless, changeless state," or "Knowledge is a uniform and timeless stream," it instantly transmutes these concepts into a single *view*, which so satisfies the philosopher that, for a time, he forgets the miserable breakdown of the same instrument when it was confronted with a piece of sugar. The philosopher who strains at a gnat, swallows a train of camels without a twinge.

As it is with the modern alchemist's *Stone of Wisdom*, so it was with the older alchemist's *Elixir*. The Elixir always failed to transmute iron, or lead, or silver into gold; but when the alchemist failed to maintain his laboratory fires at the proper temperature, the Elixir transmuted his querulous disappointment into the comforting *view*, that "Fire is the purest and noblest of all the Elements".

The alchemists never doubted the efficacy of their instrument of transmutation. At least one modern alchemist admits that his transmuting engine is imperfect. Mr. Bradley says that the conception of the Absolute, to which his intellectual activity leads him, may be "corrected by passing outside the intellect, by taking in the remaining aspects of experience". In this process, "the proper nature of truth is, of course, transformed and perishes". There speaks the genuine alchemist. He knows what is the "proper nature of truth". Why a man should trouble himself to search for truth, and to use an instrument which he tells us is afflicted with an incurable fault, when he starts with truth in his hand, is one of those delightful contradictions which give life its savour. When the alchemist thought he had made the Red Tincture, by applying his intellectual activity to some aspects of experience, and yet failed to effect the great transmutation, he always blamed "the remaining aspects of

experience" which would insist on having their say in the work. Some aspects of experience, outside the intellect, had interfered with the workings of the intellect. Of course, the proper nature of truth had been transformed by this mischievous, meddling experience; and, of course, truth had perished. Nevertheless, the philosophic alchemist was not dismayed, for he knew that he held the truth; nor is the alchemical philosopher disheartened, for he can easily form another view which shall satisfy his strangely working intellect, and, therefore, be true.

As the older alchemist, when baffled in his endeavours to turn lead into gold, found rest and refreshment in visions of the Divine Water, the Carbuncle of the Sun, the Heavenly Phœnix; so the modern alchemist consoles himself for his failure to get any real knowledge about hard, sweet, white sugar, by floating on the timeless, changeless, ever-resting, ever-flowing stream of truth, until some untransmuted snag of experience knocks a hole in his frail craft.

The alchemist was happier than the philosopher. He never supposed that the instrument whereby he hoped to attain his heart's desire required correction. His instrument was *the truth* itself. If it did not work, the fault was in the hand that used it. Despite his protestations, the alchemical philosopher is never quite convinced of his ability to turn intellectual activity into a mechanical tool, nor of the complete reasonableness of treating human life as a series of mechanically locked doors which can be opened by his machine-made key.

I suppose he has suspicions, at times, that his attempt to treat the protean facts of life as mechanically threaded, lifeless beads, is, at bottom, profoundly comical. If an intellectualistic philosopher has any dim stirring within him of the sense of humour, he ought to cherish and encourage it. Some day, it may become his saviour. The alchemist's want of the sense of humour hastened the destruction of alchemy.

Intellectualistic philosophers and alchemists follow the same road. Both treat concepts as the great realities, and the realities of experience as transmutable appearances. Both start with a general view of things as they *must* be. But the philosophers go further than the alchemists. Cutting themselves off from human experience, they discover the apparent unreality of conceptual thinking; but they go boldly on, and find unity in the maximum diversity, and order in a very orgy of disorder. The alchemists used their concepts more humanly; because they were constantly in their laboratories, and there at least they could not escape the trammels

of experience. Their workshops obliged them to come back into experience. They stretched their concepts, and brought them nearer to being instruments for examining realities than the philosophers bring their imaginings. Nevertheless, the alchemical concepts differed radically from those used by men of science; they were treated as more real than sensible realities; they were explained by realities, instead of being used to explain sensible experiences.

The endeavour of students of the natural sciences is "to liken their imaginings to the facts which they observe". The alchemists worked hard in their laboratories, "sweating whole days and nights by their furnaces," as Paracelsus says, in order that they might observe facts which they could liken to their imaginings. The intellectualistic philosophers "diligently follow their labours" (to quote Paracelsus again) of likening their thoughts about unreal "relations of isolation and hostility" to their imaginings of an Ultimate Reality wherein all these relations "are affirmed and absorbed".

Men of science and humanists begin by carefully examining particular sensible experiences; passing to the examination of groups of sensible experiences, they formulate laws, frame hypotheses and theories, and use these as instruments for furthering their purpose, which is to gain knowledge about perceptual and conceptual experience. Alchemists began with a general view that satisfied their intellect; they examined those parts of particular sensible experiences, and of groups of these experiences, which their intellectual attitude selected as important, and used the results as an instrument for advancing their purpose, which was to strengthen their intellect-satisfying conception, and, by projecting that conception outside experience to find that "heavenly and spiritual pattern," whereof, they declared, "this natural world is only an image and material copy".

Philosophers of the absolutely intellectualistic school begin by declaring the worthlessness of sensible experiences, except as material which can be transmuted by the touch of their concept-made talisman, trans-empirical reality, into evidence of the abiding reality of the instrument which transmutes it. Each philosopher uses transmuted experience as a means for furthering his purpose, which is to escape from the illusions of sense, from what is "degraded in the scale of being," to restfulness in those aspects of truth which most strongly commend themselves to his conception of The Truth, and give him a foundation whereon to construct a complete system which he substitutes for the complete systems of other philosophers.

From the monstrous height of Ultimate Reality, the philosopher looks down, with a fine scorn, at the "merely practical," the "irrelevant" truths of natural science, which give real men intense intellectual satisfaction, fill them with noble curiosity, will not suffer them to rest contented with the truths they have, make them rejoice that "man is hurled from change to change unceasingly, his soul's wings never furled," open paths that lead to wider truths, "do not affirm the limitation of knowledge as a bar to inquiry, but as a bar to finality," widen their imagination, stir their emotions, and enable them to control, to some extent, the relations between themselves and their environment.

IV.—THE METAPHYSICAL METHOD OF HERBART.

By George H. Langley.

I.

It is the purpose of this paper to consider the method put forward by Herbart as the instrument by which inference can be made from the common concepts of experience to such knowledge of Reality as shall render a rational explanation of experience possible. It will be well to define at the outset Herbart's relation to his great predecessor Kant, and his great contemporary Hegel. Herbart's philosophy is founded on Kant, as is Hegel's, though Herbart and Hegel are almost wholly opposed to one another. Hegel is the better known, for Herbart's attempt at continuation has been much ignored, and there is no English work on the subject; yet it is of interest as leading to a consistent pluralism.

Herbart differs from Kant concerning the possibility of knowledge of ultimate Reality. Kant denies this possibility, whereas Herbart maintains that the nature of appearance is significant of the nature of Reality—"Wie viel Schein, so viel Hindeutung zur Sein". Kant, says Herbart, does not "accept the decided challenge to undertake an investigation that would lead to the determination of what exists in Reality (Das Seiende) as it is of necessity determined, so that appearance should present itself as it is and not otherwise" (iii., § 118, 344).[1] Nevertheless it is evident that "as the smoke points to the fire, so does appearance to Reality; it not merely points thereto, but requires us to set about looking where the fire burns" (iii., § 118, 344). To understand this divergence, the point at issue between the two philosophers must be stated more clearly. Both start with experience, experience which is for them necessarily organised by certain common concepts, such as space, time,

[1] References throughout are to Hartenstein's edition of Herbart' Works.

substance, the self, etc. Further they both agree that these concepts of common life are contradictory, and that they cannot therefore as such be predicates of Reality. But whereas Kant is willing to reserve for them a phenomenal application, and declares them valid of appearance, though not of Reality; Herbart, on the other hand, stigmatises them as unthinkable, and as requiring reconstruction. With reference to this Herbart says: "The urgency of the thought that if nothing is, then can nothing appear, was grasped neither by Kant nor by his school. And why not? Because it seemed to them quite possible to rest content with the familiar and common concepts, so long as they only took care not to regard their objects as things in themselves" (iii., § 118, 344).

Herbart's dissatisfaction remains in spite of Hegel's daring attempt to avoid this defect of the Kantian system. It may be that the acute and analytic mind of Herbart failed to comprehend a system that was the product of the more intuitive and synthetic mind of Hegel. But here we are only concerned to indicate the source of Herbart's discontent with the Hegelian method. While acknowledging that philosophy owes an overwhelming debt to Hegel for demonstrating the inevitable nature of the contradictions, and the way in which they permeate all our concepts, he nevertheless maintains that they remain at the end of the system—as at the beginning—unsolved (xii., 671). The contradictions are recognised, but their importance is not grasped. The effect that they must have as a motive for the progress of thought is not considered. We continue at the same old standpoint, since we refuse to believe in the necessity to resolve them. Such is the root of the evil with Hegel and with his predecessors (xii., 672). This may appear strange to those who regard the Hegelian synthesis as a method of resolving the contradictions, and so of ascending, in the complete resolution, to a knowledge of the Real. But it will be remembered that each contradictory concept is a definition of the Real, or, to use Hegel's term, of the Notion, at a certain stage in its logical evolution, and is therefore retained in the complete synthesis. For Herbart this is the vital consideration. The two opposites, each of which is in itself untrue, are retained. The synthesis is an attempt, and in Herbart's opinion a vain attempt, to unite them in one (xii., 680); and for this reason he regards the system as a perfect example of the outcome of retaining the contradictions, instead of grasping their opposite, and trying to bring it into harmony with experience (xii., 672).

II.

We will now turn to the consideration of Herbart's method of meeting this difficulty. Starting from the conviction that there is a way from knowledge of appearance to knowledge of Reality undiscovered as yet by any philosopher, he undertakes to be our guide thereon. Experience seems at once to bear the marks of the Real and of the Unreal. "As appearance it has truth, . . . but it pertains to the concept of appearance that it is not in reality that which it appears" (iii., 13). So the speculative questions are of necessity raised: "What is the ground of appearance? How can we find the Real?" (iv., § 163, 15).

In a passage in the *Allgemeine Metaphysik*, Herbart has likened his metaphysical method to an arch. "Metaphysic in its entirety may be said to describe an arch, which, sinking down from the surface of the given into the deep, first draws near to the Real. then again raises itself from these depths that were within our reach, and ends with the given, in the explanation of these so far as they are possible to us. To guide this arch-like movement is the whole problem of metaphysic" (iv., § 164, 16-17). And again, "the methods for the arch as it sinks down into the deep are altogether different from those of its upmounting" (iv., § 194, 63). It will be necessary to limit this paper to a discussion of the former methods, that is, to the inference from appearance to Reality; and to omit altogether the latter, the deduction of the forms of experience from the general nature of Reality, where Herbart is chiefly concerned with the problem of the continuum.

III.

First, metaphysic is a "sinking down from the surface of the *given*". "We treat metaphysic," he says, "simply as the science of the conceivability of experience, firmly convinced that it is only when thus regarded that it can achieve a strictly scientific deduction" (iii., § 81, 222). Or again, "The metaphysician has no other business than making thinkable the actual concepts that are presented in experience" (i., § 149, 255). If we fail to grasp the significance of this relation, the whole of metaphysic appears like a dream (iii., 114). In this Herbart is at one with Kant and opposed to the Rationalists, who committed the grave error of trying to found metaphysic upon thought abstractions. They began metaphysic, he remarks, with mere concepts, and not with given concepts (iii., § 3, 74); and then endeavoured to

deduce the actual as that which determines the indeterminate possible (iii., §§ 4, 5). Such procedure from the possible to the actual, is, according to Herbart, a complete inversion of the right order. The given is actual and not merely possible; it is the actual intuited and not merely thought, for the thought of the actual is an empty abstraction; and the function of the metaphysician is not merely to think but to know (*erkennen*) (iv., § 166, 4).

IV.

Since, therefore, it is of such vital importance to start with given experience, we must go on to determine the characteristics of what is thus described.

(1) The given is an ultimate *datum*, and involves an immediate certainty for which no proof is required. "There ought to be and can be no proof that something is given, and that we perceive it, neither can this fact be expounded" (iii., 13). And should we further ask how we can know that the given is somehow real, we again discover that this is an immediate and ultimate conviction which admits of no proof. The given simply *is*, and this fact alone signifies that in some manner it is real (iv., 593). All our sensations, perceptions, and feelings are so characterised.

(2) The given is manifold and not a unity. In the words of Herbart it is an "entirely, undetermined, disconnected, and miscellaneous multiplicity of bodies". Since the time of Kant, Fichte, and Spinoza, we have looked for unity in space and time, in the self, and in substance, but in none of these is unity given. "Neither totality nor unity is given" (iv., § 165, 18), but "things with several and changing properties" (iv., § 169, 21). With respect to this Herbart is in agreement with Kant, for whom perfect unity is an ideal of Reason, and cannot be given in experience. Again, of course, we can look for no proof of the plurality, but have immediate evidence thereof. We are, moreover, frustrated in every effort to impose perfect unity upon our experience.

(3) It follows from the above that the given is not only a multiplicity of matter as with Kant, but also comprises the forms of experience. Things with their several and changing properties involve the forms of space, time, inherence, change, and the self, for to be given is to be presented to a self. Although complete unity is not and cannot be given, nevertheless we cannot escape unity entirely. No mere plurality is given, but plurality which is also one (iv., 594); or, more correctly, the individual constituents of the many are them-

selves recognised as determinate groups of properties, that is, as instances of the 'one' in the 'many'. As Herbart puts it, metaphysic starts not merely with matter, but with "the given in its entirety, organised through general concepts" (iv., § 166, 18). It takes as *data* the very general concepts which are common to the sciences and essential to all good thinking (i., 557).

(4) But while a unity of matter and form is presented in the given, Herbart denies that they possess an equal claim to be regarded as real. It is impossible to doubt the matter immediately given in sensation (iv., § 169, 21). The existence of things is distinguished from their qualities; and the presentation of anything is regarded as self-evident testimony to some real existence, for "if nothing is then can nothing appear". The fact that something, and therefore that matter, *is*, is beyond dispute. But the forms of experience can be doubted. It is these that, on closer investigation, are seen to bear the stamp of the real and the unreal. And why? Because they seem at once both to be given and to be not given. They are given since they are not arbitrary. Should one for a moment endeavour to set forth all his simple perceptions as an entirely formless and chaotic mass, he would soon comprehend the necessity of predicating anew the well-known forms (i., 175). And not only are the general forms of experience given, but for each particular sensible object a determinate form is given in a manner peculiar thereto. Were this not so, we could substitute other shapes and times and distances at will. In like manner also we could at pleasure construct things out of properties, not merely as the poet does, but so that they would actually enter into the series of perceived objects. On the contrary we find ourselves absolutely constrained as soon as we attempt to alter the groupings of properties (iv., § 171).

So far then the forms must be real, but when we ask how such forms are given doubt immediately besets us. We are face to face with the problem which Hume expounded so clearly in reference to the necessity of the causal relation. When the question arises as to whether the relation between the cause and the effect is given, whether, that is, the activity that proceeds from one thing to another passive thing is seen; we have to reply that it is not, and may add that it cannot be seen (i., § 22, 66; iv., § 168, 21). The reason of this is that logical reflexion upon the forms of experience gives rise to a dilemma. Since the forms are immediately presented, it follows that they must be given either (1) in themselves, or (2) in the material. But neither of these

alternatives is true. For it is essential to the nature of form that it has no existence *per se*, but exists solely in union with matter; while, on the other hand, it is not possible for the form to inhere in any of the elements which it serves to unite. An examination of some particular form will illustrate this. The time interval between two sounds, for instance (1) is not yet present with the perception of the first sound, and so cannot be perceived therewith; and (2) is already passed when the second has come into being; further (3) it can have no independent existence. We will take one other example, namely, the unity of representation in the self. It is clear (1) that such unity is not given with the perception of a single representation, and (2) that it must be external to the representations, for it knows itself immediately as that which represents them; but (3) psychology teaches that the pure self is a false abstraction (*Unding*).

Considerations such as these give rise to sceptical doubt, yet, at the same time, to infer therefrom that the forms are not given would be to destroy thought (iv., § 169, 23).

V.

This brings us to our next point. With what right we can step beyond the given, or, in Herbart's phrase, beyond the circle of experience? To which Herbart replies, "With the right that experience itself gives us, in that it constrains us thereto" (i., § 157, 292). A principle must not only be self-evident, says Herbart, but must be the ground of certain inference (i., § 12; iv., § 121).

This demand is satisfied by the forms of experience. They are self-evident because given, but, being also contradictory, they are unthinkable, annul themselves, and so of necessity supply an impulse to advance. Herbart has now shown that two contradictory assertions can be made concerning these forms: First, they are given; and secondly, it can be demonstrated that they can not be given. In this contest between the evidence of immediate perception, and the conclusions of logical reflexion, the former must, for Herbart, ever be victor. The metaphysician dare not try to evade the witness of the given; but the doubt raised by logical reflexion leads in its turn to reflexion on the true nature of the forms themselves. Such reflexion shows them to be contradictory, and that they cannot therefore be real as they appear. Herbart considers that the grasping of this principle is of the utmost importance. First, if no such contradiction existed, there would be no impulse to go forward, since truth satisfies and need not proceed. Apart from contradiction, therefore, we should remain

satisfied with appearance; in other words, what we now recognise as appearance would for us be Real. And, secondly, the contradictions, and therefore the impulse to go forward, emanate from experience itself. This truth had, in Herbart's opinion, been hitherto but imperfectly comprehended. For Kant and for Hegel the forms or categories pertained to the mind or thought. Were the contradictions not immanent in experience, there would again be no such forward impulse. Contradictory concepts annul themselves, and under these conditions the tendency is for thought to stagnate. But when *given* concepts cannot be thought, the fact that they are given necessitates that they cannot be denied and ignored, but must needs be comprehended in thought otherwise (iv., §§ 183, 184). Thus the necessity of advance is laid upon us (*cf.* i., 174, 255). Herbart's procedure here is the contrary of that of ordinary logic. The logician maintains that the truth of the conclusion is only guaranteed by the truth of the premises, and that from contradictory premises a false conclusion alone can follow. Herbart on the other hand holds that truth gives birth to no forward movement, but that given contradictions issue in a mental unrest which stimulates the completion of thought, and so creates an onward movement. The method might also be compared with that of Empiricism which accepts the same *data*, but provides no method for penetrating its contradictions and approaching the harmonious Real.

It will perhaps be well to show more clearly the extent of Herbart's divergence from Kant in his treatment of the forms of experience. For both, these forms are necessary for the intuition of the objects of experience, but their explanations of this necessity are opposed. Kant attributes it to the mind, and Herbart to the thing. In Kant the necessity discovered in the changes and relations of objects is assigned to the universal character of the forms themselves, reference throughout being to mind in general and not to the nature of particular minds. Since the forms are subjective and universal for Kant, Herbart considers that he fails to explain localisation in space, and dating in time (iii., § 118, 344); and also to supply reasons for the particular forms of determinate objects (iii., §§ 75, 76). Now in this we discover a shifting of Kant's starting point from the concrete particulars of experience to the universal, while Herbart, on the other hand, is able to maintain his allegiance to particular experience.

An examination of the contradictions in the different forms of experience shows that they are all specific determinations

of the one contradiction fundamental to all philosophic thinking, *viz.*, the contradiction of the 'one' and the 'many'. Thus we get the opposition of discreteness and continuity in time and space, of plurality and unity in things with their properties, and in the self with its representations. The problem of the *continuum* originating in the contradictory concepts of space and time gives rise later to the upward movement from the Real to appearance; whereas the downward movement with which we are concerned has its source in the contradiction when manifested in the concepts of inherence and change. As the contradictions are all examples of the common contradictions their solution is in Herbart's opinion possible by means of a single method, which he has designated the "Method of Relations".

VI.

The Method of Relations stands at the head of Herbart's metaphysic. It makes clear the riddle of experience by solving the contradictions which are immanent in its concepts (i., 557). Before entering upon his discussion Herbart again maintains that the method is only applied to real contradictions that are actually given, and not to such as are not actual (iv., § 189). "No system, and no man, states the problem for you, but nature" (iv., § 217, 106). His first application is to the concept of inherence, and we will use this as our illustration of the method.

The problem of inherence arises from the fact that amongst the objects of our immediate perception are things with a plurality of properties. From this we are led to inquire how it is possible for a number of properties to inhere in a single thing. As an identical contradiction would be raised, however, by the presentation of a thing with a single property, although no such thing is found in experience, it may help to a clearer understanding of Herbart's principle if we first observe its application to this simpler instance.

Let '*a*' be the property of a thing 'A'. 'A' is *ex hypothesi* simple, and if it contains '*a*,' it must be identical therewith. But 'A' differs from '*a*' as the absolute must differ from that which is inherent, the relation between them being similar to the relation of ground and consequent. 'A' and '*a*' are therefore thinkable only in separation and valid only in conjunction. This is the essence of all real contradictions. Something which is valid because it is given, is, at the same time, unthinkable since it fails in conformity with a strict interpretation of the logical law of contradiction. Now in this case the question arises: How can 'A' be at once

identical and not identical with '*a*'? Herbart replies that it is impossible for the simple being 'A' to possess such identity, but that if 'A' is repeated and a number of such simple beings are regarded as co-existing, the difficulty disappears.

Now let us pass to the case actually presented in experience. For the common understanding posits unities which can be analysed into properties. What is posited, therefore, is a complexity of properties; for as soon as we try to posit the properties separately they refuse to be separated (iv., § 201, 74). Here we have a more complex example of the contradiction of the 'many' in the 'one'. That it is contradictory follows from the fact that the thing cannot possess its properties, for no thing is given in experience as a kind of substance prior to and independent of its properties. Neither can it be identical with the sum of such properties; for each property has no existence of its own apart from its relation to the other properties, and a thing cannot be a sum of elements that have no separate individual existence. The thing must therefore be a substance in which the properties inhere, so that the two are of necessity given in inseparable unity. Thus the valid and yet unthinkable has again emerged. The unity of the thing is logically at variance with the plurality of its properties, and yet the whole is given. Further, in this instance also, the difficulty is only to be overcome by the conception of the co-existence of a plurality of simple elements as the ground of the properties.

We have already seen, says Herbart, that "the appearance of inherence is always the indication of a Real which is manifold. And we may add that in so far as inherence appears, just so far shall we posit, instead of one, several real beings. Let the thing be called 'A,' the properties of which are *a*, *b*, *c*. . . . Now we posit several 'A's instead of a single 'A'. On account of the first property '*a*' we posit $A' + A' + A' + \ldots$; on account of the second property '*b*', we posit $A'' + A'' + A'' + \ldots$; on account of the third property '*c*,' we posit $A''' + A''' + A''' + \ldots$; and so on, until it has been carried out sufficiently for all the given properties *a*, *b*, *c*, *d*, *e*, etc." But so far the unity of the thing remains unexplained. To warrant this the method requires that the first members of the series should be regarded as identical; and since this is the ground of the unity Herbart terms it substance; the other members, or member (for the argument does not require the positing of more than one) of any one series, must differ from the corresponding members of the other series, otherwise the properties which

are grounded in their co-existence with the first member of the series will not differ *inter se*. Thus the second member of the series A′ must differ from the second member of the series A″, and so on. Herbart regards these members as causes of the properties (iv., §§ 218, 222).

Such is the method which is applied by Herbart to the solution of all the contradictions of experience. It indicates that experience points to the existence of simple constituents, and that its properties are to be explained by the various groupings of these constituents. But what does Herbart signify by the grouping or co-existence? Not spatial or temporal co-existence, for, as he shows later, it is the source of the perception of space and time. It seems simply to indicate the relation in which simple elements may stand to each other, so that they are mutually affected. The relations are external—to use a spatial metaphor for what is non-spatial,—if by external we mean that they are independent of the nature of the simple constituents which enter into them. They are what Herbart terms 'accidental aspects' (*zufällige Ansichten*); accidental because the nature of the relation cannot be predicated from a knowledge of the nature of the constituent elements, although it is necessary, so far as the production of the effect is concerned (iv., § 191). Further, it seems clear that, although the simple elements are regarded as logically prior to their relations, and as having qualities which are not in any way constituted by these relations, yet the introduction of the accidental aspect, that is, of the co-existence, produces a real change, for it results in the presence of properties that would not otherwise exist. A number of simple elements in co-existence does not form a mere sum (iv., 597, 598).

We have seen that Herbart introduces this principle to restore the harmony between the conclusions of logic and the evidence of experience. At first sight, however, it appears that he has failed; for why should it be possible for a plurality of 'A's to be identical with '*a*,' whereas it is not possible for a single 'A' to be identical therewith. Surely a plurality of 'A's also is identical with 'non-*a*'. For this reason it is perhaps difficult to understand how Herbart was led to this kind of solution. I think the explanation is to be found in Herbart's strong desire to hold fast his allegiance to the given. Herbart was very conversant with mathematics and with the physical sciences, and he was doubtless largely influenced by his knowledge of these. Illustrations from mathematics and physics abound throughout the whole of his metaphysic, and it appears to me that these sciences have

been the dominant influence here. Herbart first enunciates his Method of Relations in reference to the logical contradiction of ground and consequent, and there he illustrates it by means of examples from mathematics. The vital point that mathematics seems to make clear to him is that certain properties arise as the result of grouping, which would never be discovered by an investigation of the parts grouped. For instance in the familiar proof that "In a right-angled triangle the square on the hypotenuse is equal to the sum of the squares on the other two sides," this consequence does not follow from the concept of right-angled triangle in itself nor from the concept of perpendicular in itself which is necessary for the proof of this proposition, but from the concept right-angled triangle increased by the concept perpendicular. The two must co-exist before the proof is evident (iv., § 174). Further, in illustration of his meaning, Herbart often introduces such analogies as the co-existences of sounds and colours, where what he regards as perfectly simple elements give rise in uniting to properties that are not merely the sum of their constituents. In another part of the *Allgemeine Metaphysik* Herbart criticises the Leibnizian-Wolffian conception of substance by means of an attempted application to an object of experience, in this case to a hyacinth. The experiment shows that even if the hyacinth should be regarded as a permanent substance with an unalterable essence, this substance must in its turn be viewed as subject to chemical analysis, and as splitting up into a plurality of substances that can be treated in like manner. Now such substances viewed either in themselves, or in their mere totality, do not possess the properties of the hyacinth, so that the unity of the hyacinth together with the properties that pertain thereto is contingent to the component substances (iii., 96-102). Without doubt such influences are very potent with Herbart and he seems to consider that the fundamental principles of these familiar sciences are given, self-evident, and ultimate truths. For this reason it appears to him that there is less difficulty in comprehending how a property '*a*' inheres in a plurality of 'A's, than in comprehending its inherence in a single 'A'. In fact the latter, according to Herbart, presents a logical contradiction, while the former does not.

VII.

The examination of Herbart's Method has shown how it leads him to the assumption that the Real is formed out of a plurality of simple elements, in the manifold groupings of

which our experience is founded. It has resulted in the hypostatising of the 'many' as real, while the given unity is regarded as a secondary product of the more fundamental plurality. Just as Fichte, and in some respects Hegel, had abstracted the side of unity in Kant's epistemological unity of the manifold, and hypostatised this abstraction; so Herbart has hypostatised the other abstraction of the plurality. And as again the problem for Fichte is to discover the ground of the 'many' in the 'one,' so Herbart's is the opposed problem of the inference of the 'one' from the 'many'.

We may suggest two considerations which might have led Herbart to a more adequate appreciation of unity. First, this might have been the result of a more thorough-going explanation of his own theories of 'co-existence' and 'accidental aspects'. When simple elements co-exist, they are mutually affected. There is, says Herbart, "a nearer determination of the quality of each" (iv., 598). But for what reason do they possess this mutual influence? Herbart remains satisfied with the position that reflexion upon the nature of our experience compels us to admit such mutual affection; and he does not inquire how or why it is possible. The dogmatic designation of particular co-existences as accidental or contingent is not satisfactory. To postulate contingency as a necessary principle of explanation in a theory of the ultimate nature of Reality, is to admit that the Real is non-rational. This admission Herbart himself desires strongly to avoid, as is seen from his insistence on the necessity of solving all the contradictions of the concepts of experience. There must be some ground for the contingent, and such can only be found in a larger unity.

And secondly, although Herbart so frequently maintains that metaphysic is necessarily an elaboration of the concepts of experience, yet he excludes a whole field of that experience from his starting-point. With Kant he sharply distinguishes the fields of the theoretical and the practical. "Kant's greatest service to the theory of morals," he says, "lay in the complete severance of the *Sollen* from the *Sein*," and as the *Sollen* for Herbart is only a species of æsthetic judgments, or judgments of value, all values are entirely removed from consideration in the construction of his theory of Reality. Now it seems to me that values are as much given in our experience as the forms of that experience themselves. A sunset may not only be immediately perceived, but immediately perceived as beautiful; for beauty is no whit more arbitrary than form. Should it be objected also that the perception of beauty depends upon the powers of the percipient, we can

reply that the perception of the 'one' in the 'many' is likewise dependent; we have no grounds, for instance, for asserting that an animal perceives things thus. For Kant the moral law is given in the Herbartian sense, since it is an absolute autocrat and is not arbitrary. Kant's warrant for the separation of theoretical from practical is his distinction of phenomena and noumena. We may not be willing to admit this distinction, but once grant it, and the separation becomes unassailable. But the case is different with Herbart. He maintains at the outset that this severance is unwarranted since appearance is significant of Reality. And as his purpose is to infer the nature of Reality in general from appearance, he is, in my opinion, bound to make his inference from a complete grasp of every aspect of that experience. The method of the physical sciences, which in some respects is analogous to his metaphysical method, may have influenced Herbart here also. The scientist abstracts from the worth of things, and regards them merely as things possessing qualities, a procedure which is perfectly justified so long as its limitations are recognised, but which should not be followed in a metaphysical method where the removal of such limitations is assumed. We suggest, therefore, that a wider recognition of the facts of experience might have helped Herbart towards the conception of a truer unity.

At the same time the method is of value in emphasising that the metaphysician should be true to experience, and in indicating how easy it is for him unwittingly to be faithless to this trust. It is important to recognise that in our immediate experience, forms as well as matter are given, and that although there may be a sense in which the forms are due to the mind, yet their particular character must be somehow grounded in the real presentation. As against Hegel, Herbart's service is to insist that these contradictions spring from experience itself and not from the mind. The conception of being holds a different place in his philosophy from that which it holds in Hegel's. Not that he would be unwilling to agree that abstract being is the "poorest of all possible predicates"; for the assertion of the being or existence of a thing gives no indication of its nature. But unless we are able to make this assertion, in virtue of some immediate *datum* of experience, we have no assurance that we are dealing with a reality,[1] and are not elaborating purely fictitious concepts. It is all-important for Herbart that in

[1] *Cf.* Seth's *Hegalism and Personality*, pp. 124, 125.

eliminating the contradictions, he should at no point lose touch with Reality.

Further Herbart has made it clear that experience can never be entirely left behind, though it necessitates a transition beyond itself. One mark of Reality is always possessed by experience which forbids its being set aside as mere appearance and unreal; and although it lacks a second mark which prevents our stamping it as fully real, we know that when the fully Real is discovered it must be that of which experience is the appearance. Thus the unity between the Real and appearance is demonstrated. It is somewhat curious that a philosopher, who has so keen a vision for discreteness, should have forcibly demonstrated this aspect of unity.

Two marks are required before a thing can be fully stamped as real. The first is that it should be given so that it cannot be annulled; and the second that it should not be contradictory. The one is thrust upon the mind, and the other is grounded in an irresistible tendency of the mind itself. Thus while the great contemporary of Herbart is so forcibly asserting that "the rational must be real"; Herbart himself is laying stress upon the converse: "the Real must be rational".

V.—DISCUSSIONS.

THE NATURE OF SENSE-DATA.—A REPLY TO DR. DAWES HICKS.

In a very courteous article[1] on my *Problems of Philosophy* Dr. Dawes Hicks has offered some criticisms of my views on sense-data which call for a few explanations by way of reply. On certain points, I gather that I failed to make my meaning clear, as was perhaps excusable in a popular book where technicalities have to be avoided. I will therefore begin by an endeavour to state as precisely as possible what my views are on the main points in debate.

Perhaps the best starting-point will be the theory of acquaintance and description. There seem to me to be two main cognitive relations with which a theory of knowledge has to deal, namely *presentation* (which is the same as what I call *acquaintance*), and *judgment*. These I regard as radically distinguished by the fact that presentation (or acquaintance)[2] is a two-term relation of a subject, or (better) an act, to a single (simple or complex) object, while judgment is a multiple relation of a subject or act to the several objects concerned in the judgment. From the fact that presentation is a two-term relation, the question of truth or error cannot arise with regard to it: in any case of presentation there is a certain relation of an act to an object, and the question whether there is such an object cannot arise. In the case of judgment, error can arise; for although the several objects of the judgment cannot be illusory, they may not be related as the judgment believes that they are. The difference, in this respect, between judgment and presentation is due to the fact that judgment is a multiple relation, not a two-term relation.

Among judgments, some are of the form "the entity[3] which has the property ϕ has the property ψ"; and we can sometimes make such judgments in cases where we have no presentation whose object is that particular entity x which has the property ϕ. For example, I can judge "the father of my grandfather lived in the eighteenth century," although I have never had a presentation

[1] Mind, July, 1912, pp. 399-409.
[2] *Cf. Proc. Arist. Soc.*, 1910-11, p. 108.
[3] Where it is implied that there is only one such entity.

whose object was the particular man who was my great-grandfather. In such cases, I say we have "knowledge by description" of the entity which has the property ϕ. The precise definition is as follows: "*Knowledge by description* of the entity x is knowledge that the entity having the property ϕ has some other property ψ, where the entity which has the property ϕ is in fact x, though this may not be known".[1] On the other hand, when there is a presentation whose object is x, I say that we are *acquainted* with x, or have knowledge of x by acquaintance. Thus knowledge by acquaintance does not consist of judgments, whereas knowledge by description does consist of judgments, and moreover of judgments of which the thing known by description is not a constituent.

Among objects with which we are acquainted, we can distinguish a certain kind in which the presentation is *sensible*. These may perhaps be defined as "presented objects simultaneous with the act of presentation". This definition excludes universals, because they are not in time and therefore not simultaneous with anything; and it excludes remembered objects, because these are earlier than the acts which remember them. Objects of sensible presentations I call "sense-data". Thus by definition a sense-datum is simultaneous with the act which has acquaintance with it. The word "sensation," as opposed to "sense-datum," may be used either for the act alone, or for the complex act-acquainted-with-object. The latter use seems better, and I shall adopt it in what follows.

It will be seen that much, in what appears questionable to Dr. Dawes Hicks, is really no more than the verbal result of definitions. Let us illustrate by an analogy. Let us represent the relation of contemporaneous acquaintance by marriage; then the acts are represented by husbands and the sense-data by wives, while sensations are represented by married couples. The inseparable connexion of the sense-datum with sensation, which appears to Dr. Dawes Hicks to be a problem, is merely like the inseparable connexion of wives with marriage, a matter of definition, nothing more. But of course we may, as a result of the study of sense-data, find that they have other properties in common besides that of contemporaneous acquaintance. We may then give a name to the things having these other properties, and inquire what is their relation to sense-data. Let us give the name "qualities" to those things that have all the properties common to all sense-data, with the *possible* exception of being given in sense. Then qualities, in our analogy, correspond to women; a quality becomes a sense-datum by being given in sense, just as a woman becomes a wife by being given in marriage. I think Dr. Dawes Hicks sometimes takes me to be speaking of the relation of *qualities* to sensations when I am really

[1] On Descriptions, *cf. Principia Mathematica*, vol. i., 14, and Introduction, chap. iii.

speaking of the relation of sense-data to sensations ; [1] for this reason, some of my statements appear to him more significant and disputable than they really are.

Dr. Dawes Hicks states (p. 406) : "There is very strong reason for saying that, according to Mr. Russell's account, the sense-datum appears very different from what it is". This assertion, it seems to me, results from the tacit rejection of the distinction between presentation and judgment, *i.e.* between knowledge of things by acquaintance and knowledge of truths. (In consequence of this rejection, he also misunderstands the distinction between knowledge of things by acquaintance and knowledge of things by description.) The object of a presentation is what it is, and there is an end of the matter. To say that it "appears different from what it is" can only mean that we make false judgments about it. Now the false judgment (if it is false) which we are most inclined to make about the sense-datum is, that the quality which is the sense-datum exists at times when it is not a sense-datum. This is really what is meant by calling the quality "independent" of the percipient. But this judgment, however false it may be, does not make the sense-datum appear different from what it is. If it did, it would be not the sense-datum, but something else, that we should suppose to persist after we have ceased to perceive it. Dr. Dawes Hicks raises the question whether sense-data are in any sense "mental" (p. 404). Now the word "mental" is one which, so far as I know, has no well-defined meaning. But I hold that the sense-datum is certainly something other than the subject, something to which the subject's relation is just as "external" as to the physical object. The only point where I part company from the out-and-out realist is in holding that, for various empirical reasons of detail, it is not certain that the quality which is the sense-datum ever exists at times when it is not a sense-datum.

Several of the arguments advanced by Dr. Dawes Hicks seem to assume that I regard it as *a priori* impossible to have acquaintance with the physical object. For example, he supposes that I must hold the sense-data themselves to be only known through *their* appearances, and so on through an endless regress (p. 403), and he asks : "If a mental act can stand in immediate relation to a sense-datum other than itself, and existing apart from itself, why is it disqualified from standing in a similar relation of immediacy to the physical thing?" (p. 405). I do not know of any reason why the mind should be "disqualified" from knowing the physical thing ; the question is one of *fact*, do we know the physical thing or do we not? My whole theory is purely empirical ; certain things, which I call sense-data, are known to us immediately at

[1] I plead guilty to having once (pp. 30, 31) used "sensation" when I should have used "sense-datum". *Cf.* Dr. Dawes Hicks, p. 405. The other passage (p. 16) quoted by Dr. Dawes Hicks seems to me right as it stands.

certain times, and it is a question what can be inferred as to other times, or other things at the same times. And the view that the things which are given in sense themselves exist at times when they are not given seems to me to present certain difficulties, though these are not of an *a priori* or logical kind.

This brings me to what Dr. Dawes Hicks says on the subject of colour and shape. He suggests that "the real colour will present a different aspect if another colour be reflected upon it" (p. 401). But surely we cannot speak of a colour "presenting an aspect". A colour which presents a different aspect is a different colour, and there is an end of the matter. I understand the theory advocated to be that an object has a "real" colour, which is sometimes the colour we see, but generally more or less different from it. I have admitted the possibility of this view (pp. 54, 55), but its apparent plausibility, I think, arises from what seems to me the illegitimate notion of a single colour "presenting different aspects". Dr. Dawes Hicks thinks (p. 401) that my treatment of colour is different from my treatment of shape, but this is a misunderstanding. The "real" shape is a shape in physical space, which has no more resemblance to visual space than light-waves have to colour. Shape as the sense-datum is in just the same position as colour. But spatial order reduces to relations, and these relations have certain logical properties in virtue of which they generate a three-dimensional manifold. I suggest that the apparent shape "corresponds" as a rule to a real shape, due to relations having similar *logical* properties. But it is a case of *correspondence*, not identity, just as in the case of colours and their physical correlates.

On the subject of appearance and reality, Dr. Dawes Hicks distinguishes two views between which he says I hesitate (p. 402). As a matter of fact, though I have doubtless been less clear than I ought to have been, I have consistently held to the second of his two views. For readers who know the history of the terms "appearance" and "reality" though not (I think) for uninstructed readers, the use of this antithesis was perhaps somewhat misleading, since I regard sense-data as existing quite as truly as anything, indeed I regard their existence as the ultimate certainty on which all knowledge of what exists must be based. But it seems that their existence and nature are to some extent dependent upon the subject, not in the sense that they are illusory, or that they are "in" the mind (whatever that means), but in the sense that there is no good reason to suppose that they exist when they are not sensated, or that a particular sense-datum is ever sensated by more than one subject. *If* there are physical objects, and the scientific account of them is roughly true, it would seem that a sense-datum has a complicated relation to a certain physical object, compounded of the kind of connexion which would commonly be called causal, together with similarity of position in two structures (that of sense-data and that of physical objects) which have certain

logical affinities. The object to which a given sense-datum has this relation is called the object "corresponding" to the sense-datum; the sense-datum which has this relation to a given object is called an "appearance" of this object. I desire all further associations of the word "appearance" to be disregarded wherever the word occurs in *The Problems of Philosophy*. Thus appearances are what are certain and primitive; the physical objects inferred are hypothetical and by no means certain. If there are physical objects, it will be a matter of choice in definition whether we say that physical objects "appear" or not; the only important point is to be clear as to the facts, namely that sense-data are presented and physical objects are not. It is to be observed that, if there are physical objects, the sense-data which are appearances of a physical object are not determined by the object alone but also by the physical intermediaries, including the sense-organs. This is one fact which makes it very difficult to identify the physical object with the sense-data to which it corresponds.

Dr. Dawes Hicks invites me (p. 404) to consider whether visual space is "caused" by physical space. Of course both are systems of relations, and neither alone is either cause or effect. But I should say that, in the same sense and to the same degree in which colours are caused by their physical correlates, the complexes consisting of colours with visual-spatial relations are caused by the complexes consisting of their physical correlates with physical-spatial relations.

Two minor points remain to be noted. On page 408, Dr. Dawes Hicks argues that the brown colour of the table does not exist, but is timeless like a universal. It seems to me, for reasons which I have set forth at length elsewhere,[1] that although there is a universal which is a given shade of colour, there are also particulars which are instances of the universal, and are sense-data when that shade of colour is seen. It is these particulars which are concerned in the discussion in question, though probably my language could often be equally interpreted as applying to the universal.

The other point concerns the word "perception". I use the word myself as synonymous with "sensation," since I cannot observe any occurrence intermediate between sensation and judgment. Possibly there may be such occurrences, but in any case I mean by "perception" a dual relation, coming under the head of presentation, not a multiple relation such as judgment.

In conclusion, if I might venture to state what are to me the essential points, they are these two: (1) that there are two kinds of cognitive relation, one dual and one multiple, and that it is the dual relation which gives us our data as to what exists;[2] (2) that

[1] "On the Relations of Universals and Particulars," *Proc. Arist. Soc.*, 1911-12.

[2] *Cf.* "The Nature of Truth" in *Philosophical Essays*, and chap. xii. in *The Problems of Philosophy*.

propositions of the form "the entity having the property ϕ has the property ψ" do not contain as constituents the entity x which in fact is the entity having the property ϕ (supposing there is such an entity), and may be known when we do not know what entity is the entity having the property ϕ.[1] The rest of what I have to say depends mainly upon these two doctrines. As regards the question of matter, whether there is such a thing, and, if so, what are its relations to sense-data, the argument is difficult and involves a great mass of detail; it is therefore highly probable that any conclusion one may reach at present is more or less erroneous. But if the above two doctrines are correct, they must necessarily have far-reaching consequences in theory of knowledge; and so long as there is disagreement about them, it is difficult to come to close quarters as regards views depending upon them or upon the denial of them.

B. RUSSELL.

[1] *Cf. Principia Mathematica*, *loc. cit.* Also "On Denoting," MIND, Oct., 1905, and "Knowledge by Acquaintance and Knowledge by Description," *Proc. Arist. Soc.*, 1910-11.

ETHICS AND THE NEW INTUITIONISTS.

In reviewing my dialogue, *Maurice, the Philosopher* (Mind, New Series, No. 83), Mr. Alfred Sidgwick has placed in the forefront some points of great interest and logical importance. I do not feel confident that I appreciate fully the meaning and bearing of his various suggestions; but the readers of Mind will, perhaps, bear with me, if I venture to offer some remarks upon them, simply with a view to their elucidation. Too long the vision of the Absolute (all-transcending and all-consuming) held sway in the realms of philosophy, to the practical exclusion of Ethics and Politics, of ἡ πολιτική, as the Greeks would have called it; and although that impolitic sovereignty, that universal Hegelian occupation has now been considerably shaken, the problems of knowledge and reality are still in the highest place, and there appears to be no little danger that the principles of practice may be lost to theory.

The brief observations, that follow, deal only with Mr. Sidgwick's remarks upon that second half of my book, which is entitled "Happiness the Good". The questions debated therein appear to me of central importance, although for reasons dramatic or popular they follow (like *atra cura*) the search for the character of happiness. As I read Mr. Sidgwick's remarks, he considers the negative argument "circuitous"; but the plan of the section will possibly explain this. Leonard, who is upon the offensive, puts forward at the outset some ethical doctrines, which have found hitherto, if I rightly interpret them, their fullest and most lucid account in Mr. G. E. Moore's *Principia Ethica*. May it not, indeed, be reasonably said that that work and that alone in our language has presented Intuitionist Ethics in its final and most developed form to the glory of Cambridge and its own dissolution, thus establishing a pre-eminent claim upon the attention of the moral philosopher? Whether Leonard has apprehended correctly the main contentions of this new ethical school or (to parody Plato a little) laid a rough hand upon his father Parmenides, only Parmenides himself could determine. But the other two characters, Maurice and Lancelot, endeavour to meet him upon his own ground and thus allow him to dictate in large measure the main march of the ethical argument. Now, the primary doctrines of the school I am speaking of would in substance appear to be these: that we have a notion of "good" in the mind, distinct not only from all other notions but also from the words, that may be used to denote

it, that this notion attaches itself, as it were, to certain objects and experiences in life, that, therefore, it issues in judgments of the character, "This is good *per se*, in itself," and that these judgments, in effect compose the whole body of doctrine concerning the Good. Such a theory, indeed, if well-founded, would demand our most serious attention; and perhaps it is really nothing else than the ordered, articulate system, of which the mere rudiments and beginnings may be seen in common sense and the judgments of mankind. Its authors would, presumably, repudiate the intrusion of Psychology into Ethics; none the less is its basis psychological in its reliance upon the notion of "good"—in other words, upon a certain mental factor, which is unique and ever coming into play. Certain experiences excite or call up a feeling of pleasure or pain; in like manner, may certain experiences evoke or call up the notion of "good". The feeling and the notion alike may be said to be latent in us, to wait, as it were, in our minds for the experiences proper to themselves. Hence, Lancelot and Maurice, in their character as critics, deny that at *any* time whatsoever they find such a notion of "good" in their minds, as distinct from the words "good," ἀγαθός, *bonus*, etc. They find only words, never notions; propositions, never a union of notions. In other words, if we are anxious to meet the Intuitionists on their own ground, to meet their fundamental contention, the primary question we must put to ourselves is: "Have we this unique mental factor or not?" After that we may go on, if we like, to point to the difficulties, that would seem to arise in the doctrines of the new Intuitionists, if we had such a notion in the mind as the predicate "good" may be used to denote. If, however, we have not such a notion, some such theory as I ventured to indicate, may be the more readily considered by philosophers. This is, in general, the plan of the main argument—to meet and combat the new Intuitionists in the very heart of their ethical citadel.

Now, returning to Mr. Sidgwick's suggestions, I will endeavour very briefly to bring out some difficulties, that they have to my mind. And, first of all, I do not quite see how such arguments as he seems to desiderate from "the nature and purpose of definition" would bear on the main question at issue in a struggle with the new school of philosophers. The contention about the notion of "good"—at least so it appears to my mind—is nothing else than a piece of psychology and, therefore, can only be answered from psychological introspection itself. It is, in fact, on a level with the contention that human beings have sensations of red—sensations, which are commonly denoted in English by the predicate "red". The notion is unique, as is pleasure or pain. It is not to be identified with other experiences; it is not expressed, of necessity, in words; it is independent of diction, of judgments. I conceive that in Mr. Sidgwick's philosophy Logic has for its subject-matter human assertions, which are found only in the shape

of language or, if you like, can only thus be examined. Hence to argue upon logical grounds would appear to assume for the word "notion" a sense not intended by Leonard in the book.

And this brings me to another little difficulty—as to what precisely is Mr. Sidgwick's position upon this interesting piece of psychology. He speaks, for instance, of "words" as "the only index to the notions in the assertor's mind," of "a familiar notion, such as that to which the word 'good' is in English the accepted verbal index," yet he "points out that the distinctness of name from notion exists only so long as we are not concerned with that most important function of definition which consists in explaining the meaning of one man's assertion to another who finds it ambiguous". Is it possible that he is using the word in a sense different from Leonard's in the dialogue? Leonard is referring, as we saw, to an experience, that is simply independent of words.

But let us go back to definition once more. I do not feel sure that I know what Mr. Sidgwick here means by "defining a name (or notion)," and "giving an account of the thing named," and how far Leonard or the others are engaged in defining in any sense he intends. Leonard, in expounding his theory, which, as we have seen, is a piece of psychology, does but introduce the term "definition" to bring home to the other two characters the nature of his own professed notion of "good". He would, I think, be the last to deny that "definition" may have many meanings. Notwithstanding, in one of its meanings, it throws light upon the point he is urging. Incidentally, however, be it noted. He asserts that he has this unique notion, he asserts that it is simple, not complex, that he cannot upon inspection resolve it or break it up into two other notions, as the notion of "right" is by many resolved into "the Good" and "conducing towards it". But to say that any notion is "simple" is to say, in one sense, that it is "indefinable". To this use of the word "definition" the other two characters raise no objection. They, however, would be far from pretending that definition is "one process only," and Lancelot says in the dialogue "'Good' cannot be defined *in that sense*" (p. 49). He does not see how the word "good" (for he is thinking of the *word* "good" alone, and has not comprehended Leonard's notion as yet) can be broken into this or that part, as it were some material object.

Perhaps, in this connexion I may venture to add that, could I but find their unique simple notion, I should not object to the Intuitionists' telling me "that 'good' meant 'good' and nothing else". For to understand what "good" meant—whether notion or word signifying it—I should be compelled to look into myself, as to understand what "red" meant, I should be referred to my sensations and impressions of "red". And I think that, in spite of Mr. Sidgwick, the new school of Intuitionists could claim that this saying of theirs did assist us to find out about the nature of the Good; for did it not assert, in effect, that the notion of "good"

is entirely distinct from any and all other notions, such as those, for which in our language terms like "useful" are commonly used, and are we not well on the way, when once this is clear to the intellect, to the finding *what* objects evoke it or summon it into our minds? Such, perhaps, is the way they might argue, whatever we may think of the conclusion.

If we dealt here with the meaning assigned to the predicate "good" and the substantive "Good" in the province of Ethics, of ends and of purposes, by Maurice and Lancelot in the pages of the dialogue, we should be carried on at considerable length into the whole subject of the Logic of Idealism. But, perhaps, I may have an occasion of dealing with this in the future. It may be remarked, however, that the characters in *Maurice, the Philosopher*, are not engaged, unless I have mistaken Mr. Sidgwick altogether, in "the quest for a 'definition' which shall fix all possible uses of a word". They are urging the adoption of a certain use of a word in a particular province or context.

I must in conclusion repeat (what I said at the outset) that I may by some unlucky chance have missed the whole point of Mr. Sidgwick's remarks; and I offer these comments with diffidence, though not without "a hope against hope" that some at least of our leading thinkers may turn again towards those ethical problems, to which one would fain see devoted the rarest and most learned intellects. As one, who is only too glad of an opportunity to acknowledge his indebtedness to Mr. Sidgwick's contributions to Logic, I cannot but feel that, if he would assume the desired rôle of that missing fourth character and show us the import of definition in Ethics, much light would be thrown upon a science so important and yet so neglected in this wonderful twentieth century.

HAROLD P. COOKE.

NOTE.—I ought, I think, to add that Mr. Moore would not, if I apprehend him correctly, describe his simple notion of "good" as "a mental factor"; and so far I have diverged from his precise doctrine. Simple notions or objects, so he tells us, "are simply something which you think of or perceive". In *that* sense they may be called mental factors. But Mr. Moore would, I fancy, rather say that they are not "in the mind" but "before it"—are "objective" qualities of objects and not "subjective" factors of the intellect. However, if I am right in assuming this, I am utterly at a loss to conceive *how* this quality called "good" "belongs to" objects. I have, therefore, for this and other reasons, which I will go on to state very briefly, ventured in my dialogue to transfer this notion from the object to the intellect. First, I think that the general reader, for whom in some part my book was intended, would scarce understand this doctrine of qualities, which in some way to me unintelligible attach, though timeless and non-existent (we are told), to things and objects, that are existent in time. Indeed, in his later volume called *Ethics* Mr. Moore does not deal with this aspect—perhaps as writing for a more general audience. And, secondly, I think from his language that many readers will understand him in my sense, for does he not speak quite indifferently of "idea," "object," "property," "predi-

cate," "adjective," "notion," and "concept"? Do not "idea" and "notion" and "concept" in English commonly denote a mental factor? And, thirdly, I would suggest that his ethical doctrine will acquire the most supporters in the form I have thus ventured to give it in my dialogue. Nevertheless, my criticisms will stand—*mutatis mutandis*—of his original theory. Instead of asking, "Have we this mental factor?" we shall ask, "Do we perceive this unique quality?" And so on throughout the whole argument, substituting the "objective" for the "subjective," wherever that may happen to be necessary.

MYSTICISM *V.* INTELLECTUALISM.

Prof. Taylor's interesting and evidently conscientious notice of Signor Aliotta's book in the last number,[1] contains an important statement of which I hope notice will be taken in authoritative quarters. Signor Aliotta has apparently conceived Mr. Bradley's philosophy, not as a development, but as a *reductio ad absurdum*, of Neo-Hegelianism, on the ground that it teaches the self-contradictoriness of all relations, and "degenerates into an intuitionist mysticism," and has in consequence enrolled him among the foes of 'intellectualism'. It is somewhat surprising to find that Prof. Taylor endorses this classification, and appends to it a censure of the pragmatists who have attacked Mr. Bradley's philosophy as a pillar of intellectualism.[2] We have therefore a situation which urgently needs to be cleared up, lest the combined authorities of Prof. Taylor and Signor Aliotta should give currency to an error which will be copied from one history of philosophy into another *in saecula saeculorum*, and do injustice to a number of important philosophies, besides confusing a number of controversial issues.

The questions to be decided are: (1) Is it true that Mr. Bradley has really reduced Neo-Hegelianism to absurdity, and if so that he has done so consciously and of malice prepense, and is recognised as having done so by the victims of his reduction? (2) Is it true that he is and conceives himself to be an anti-intellectualist? (3) Is it true that he has been misrepresented as such by the pragmatists?

Evidently the first two sets of questions can only be decided conclusively by the Neo-Hegelians and by Mr. Bradley himself, and I trust they will not shrink from either authoritatively confirming Signor Aliotta's discovery or putting a stop to the circulation of what many will regard as an injurious report. I need, therefore, merely point out some of the inherent improbabilities of this estimate of the relations between Mr. Bradley and Neo-Hegelianism. If Mr. Bradley had really intended to reduce Hegelism to absurdity, is it probable that he would have spoken of Hegel with the reverential awe he invariably professes? If the effect of his philosophical ministrations had been widely understood to

[1] No. 84, p. 536.

[2] It is very hard to understand why 'intellectualism' should be regarded as a slur on a philosophy. Surely if a philosopher is an intellectualist he ought to be proud of the appellation.

reduce Hegelism to absurdity, is it probable that the Anglo-Hegelians would have always spoken with a similarly reverential awe of Mr. Bradley? How, again, on the theory approved by Prof. Taylor shall one account for the fact, noticed long ago by Prof. Stewart,[1] that there have never been any serious objections raised by Hegelians to Mr. Bradley's procedures?

Of course, this is not to say that Prof. Taylor may not be right. Mr. Bradley may have achieved the final *reductio ad absurdum* of Hegelian intellectualism. Philosophies are often refuted from within, and in many respects such refutations are the most satisfactory. Only, if such is the case here, neither he nor his victims appear to have become aware of the fact, and to be any the worse for it, and we should all take note of what has happened, and revise accordingly our views both of Hegelism and of Mr. Bradley.

On the subject of pragmatist criticisms of Mr. Bradley's philosophy, I may perhaps speak with some little authority myself, and point out that they can appear to condemn it as *unmitigated* intellectualism only to a very cursory inspection,[2] and that it seems very strange that 'intellectualism' should be regarded by Prof. Taylor as a more damaging disparagement than '*reductio ad absurdum* of Hegelism'. Of course the truth is that the pragmatist criticisms of Mr. Bradley's positions have throughout implied a recognition that they were *not* naïve, uncritical intellectualism, like, *e.g.*, Hegelian panlogism. The latter it would have been entirely futile to criticise, just because it can give no meaning to the conceptions of will, purpose, action, value and personality, and to the concrete problems of scientific knowing, and so could not be expected to have that initial comprehension of voluntaristic developments which is a condition of profitable discussion. Mr. Bradley on the other hand had so brilliantly expounded the embarrassments of the rationalistic theory of knowledge, and so manifestly indicated the only path of escape from them which conducted neither to mystical irrationalism nor to scepticism, that it seemed worth while to demonstrate the entire practicability of this route, even in face of his own refusal to adopt it. That in point of fact he himself has refused to leave his original position and preferred to stand pointing in three directions without going in any, undergoing the alternate or simultaneous attractions of theoretical scepticism and mysticism, while preserving his hold on life practically by a severely subordinated pragmatism, did not seem to destroy his fundamental rationalism, simply because if he had been willing to advance in a voluntarist direction, he would *ipso facto* have emancipated himself from the paralysing influences both of the scepticism and of the mysticism to which his acuteness in perceiving the defects

[1] MIND, No. 43, pp. 372-376.

[2] If Prof. Taylor will do me the honour of reading *Studies in Humanism*, pp. 115-118, and my papers in MIND, Nos. 63, 67, 73, 76, he will very likely agree.

of rationalism had subjected him. In other words, but for his loyalty to rationalism neither the sceptical nor the mystical strains he exhibits would have appeared in him. Of course his whole philosophic attitude may thus seem to many highly arbitrary, but nothing is more misleading than to make a philosopher more consistent than he himself desires to be ; it would surely be as mistaken to claim Mr. Bradley on this account as ultimately a voluntarist as it is dangerous to deny that he remains an intellectualist, even though he has detected the intellectual incoherence of intellectualism, until he himself has affixed the final label to himself.

F. C. S. SCHILLER.

VI.—CRITICAL NOTICES.

Über Annahmen. Von A. Meinong. Zweite umgearbeitete Auflage. Published by J. A. Barth. Pp. xvi + 403.

Some apology is needed for the tardiness of this notice of a work which bears the date 1910. The reviewer can only plead that the book did not fall into his hands till late in last year and that it deserves something better than a hurried reading.

The new edition of *Über Annahmen* is considerably larger than the first, as a good deal of controversy has raged over the subject and Meinong has taken it into consideration. In England there have been three important articles by Mr. Russell in Mind, vol. xiii., and abroad there has been war to the knife with Marty. Meinong has also made changes of arrangement, and, on certain points, changes of view.

Everyone is or ought to be acquainted with the thesis of Meinong's extraordinarily able and important work. It is that beside acts of judgment and ideas there is an intermediate kind of psychical state—the act of supposing—which resembles judgment in that its content can be affirmative or negative, but differs from it and resembles ideas in that it is unaccompanied by conviction. Meinong tries to show that it is necessary to assume such acts for a variety of reasons and that they throw a light on some of the most difficult questions in the theory of knowledge. The extreme value of the book lies not merely in the evidence brought forward for the existence of suppositions, but in the discussions to which the search for suppositions gives rise on all manner of difficult points in logic and what Meinong calls 'Gegenstandstheorie'. There is further a contribution to Ethics and Aesthetics in Meinong's attempt to show the necessity of assuming something comparable to suppositions in the realms of Feeling and Volition.

Meinong does not think it necessary to prove that suppositions differ from judgments, but he thinks that he must prove that they differ from ideas. He considers that he himself has introspective evidence for this difference; but he admits that it is better to have a proof. It will be remembered that Mr. Russell saw no reason to differentiate between the two. Meinong's argument on this point is important, for he constantly appeals to it throughout the book. It runs as follows.

We can suppose negative propositions, but a negative cannot be

grasped by an idea, but only by something like a judgment. The latter point he attempts to prove, and, to do this, he has to assume certain characteristic conclusions of his theory of Objects of Higher Order. A negative is certainly a complex; and the idea of a complex, though certainly not in any sense the sum of the ideas of the elements, is yet 'produced by' these ideas and cannot occur without them. Hence if there were an idea of not-A there must be ideas of A and of something else to serve as foundations for this idea. At this point Meinong discusses the suggestion that propositions of the form A is not B can be reduced to ones of the form A differs from B. Difference is the object of a produced idea; and so, if negation could be reduced to assertion of difference, it would be plausible to hold that there are produced ideas of negatives.

Meinong has a general argument which, if valid, would be fatal to any attempt to make negatives objects of produced ideas. It is as follows. The judgments based on produced ideas of complexes and asserting the relation of their elements are *à priori* and necessary. If negatives can be presented by ideas it must be by produced ones, and negative judgments must be necessary. But many negative judgments are not necessary. This argument does not seem to me satisfactory. Take Meinong's examples. It is necessary that red differs from blue, but contingent that a stone let go does not rise from the earth. Hence the examples seem in his favour. But take the proposition: the Vice-Chancellor of Cambridge University in 1912 differs from the Master of Trinity in 1912. This proposition is true and is about difference which is an object of higher order; yet it is surely as contingent as the one about the stone. If this be so the fact that some negative propositions are contingent is no ground for denying that negatives may be objects of produced ideas.

The question whether negatives can be objects of produced ideas seems then to remain open. But we may glance at Meinong's special arguments against the reduction of negation to difference. Meinong holds that you cannot identify 'is not' with 'differs from,' because difference has degrees whilst A is not B is a statement incapable of degrees. Again he thinks that such an interpretation clearly breaks down over propositions that deny existence: 'Perpetual motion does not exist' cannot be the same as 'Everything that exists differs from perpetual motion'. Taking the second point first we may agree that although the two propositions are equivalent they are not identical. On the other hand if we take the form: 'A perpetual motion differs from any motion that exists,' it is not so clear that this proposition differs from what we are thinking about when we assert that perpetual motion does not exist. As the word 'is' is so ambiguous we may fairly expect 'is not' to have several different meanings. The interpretation of 'is not' by 'differs from' is most natural where 'is' asserts identity as in 'Mr. Asquith is the Prime Minister'. If it is to be valid elsewhere we

must suppose that all other meanings of 'is' can be reduced to assertions of identity in some respect. The most common use of 'is' is to express inherence as in 'the pillar-box is red'. You cannot deny this by asserting that the pillar-box differs from red, for this is so whether it be red or not. On the other hand 'the pillar-box differs in colour from everything that is red' is the denial of 'the pillar-box is identical in colour with something that is red,' which is certainly not what was meant by asserting that the pillar-box is red. So I think we may agree with Meinong that not all negations can be reduced to assertions of difference. At the same time his argument that difference has degrees does not seem to me valid since 'difference in some degree,' which is what the proposed substitution has in mind, has no degrees.

In Chapter V. Meinong has an *argumentum ad hominem* against Mr. Russell's view that supposition may be merely ideas. His argument is that Mr. Russell admits that in judgments there is a difference of content according as the proposition judged is positive or negative. But there cannot be such a difference in ideas. This does not seem to me a strong argument even *ad hominem*. If two sorts of act can grasp the same object it does not follow that because in acts of one kind there is a difference of content corresponding to differences in the object there must be differences of content in acts of the other kind. Moreover I do not see why it should be certain that there are not such differences of content in ideas, in view of the notorious difficulty of discovering anything about content by direct introspection. Finally I do not think that it is nearly so certain that there is a difference of content between the supposition of P and the supposition of not-P as it is that there is such a difference in the corresponding judgments. I cannot help thinking that there are really three different attitudes towards a proposition and that Meinong confounds two of them under the name Annahme. These two I would distinguish as supposition and entertainment. It seems to me that entertainment clearly differs from supposition and is presupposed both by it and by judgment. When Meinong insists on the resemblance of Annahmen to judgment I think he has suppositions in mind; when he says that every judgment presupposes a corresponding Annahme I think he has entertainment in mind. But entertainment as distinct from supposition does not seem to me to differ from having an idea.

In the second chapter Meinong considers the characteristic function of sentences (Sätze). It must be noted that by these he means noises or marks on paper of a certain kind and neither judgments, which name he restricts to a class of mental acts, nor the objects grasped by such mental acts. The latter indeed are often called judgments or propositions, but we, following Meinong, will call them Objectives.

Of sentences it may be said that they *are* expressions and *have*

meaning. These noises or marks allow us to infer the existence of certain psychical states (*e.g.*, judgments). The judgments then have the sentences for their expression. These psychical states further have objects, and these objects are the meanings of the sentences.

The example of the sentence illustrates Meinong's general theory of expression and meaning. But he introduces further refinements. You can sometimes infer from a sentence which expresses a judgment the existence of other psychical states. If a man says: 'I have toothache,' and you believe him you can infer the existence both of a judgment and a feeling in his mind. The sentence is then primarily the expression of a judgment and secondarily of a feeling.

Beside secondary expression Meinong also introduces secondary meaning. This depends on the theory of introspection which he put forward in his book *Über die Erfahrungsgrundlagen unseres Wissens.* Certain states of mind like judgments from their very nature have objects, or, as he says, 'present'. Others, like feelings, do not have objects, but can, on his view be made to present themselves. In this case they become their own objects, and then the word or sentence that expresses them gets (what it lacked before) a meaning. This he calls 'secondary meaning'.

All this discussion is preparatory to the question whether sentences always express judgments. Meinong holds that this is false both of principal and subordinate sentences. The principal sentence: 'Is it raining?' does not express a judgment; for, if we judged either that it was or that it was not raining, we should not ask the question. Similarly in 'I am uncertain whether Smith is trustworthy' I make no judgment about Smith's dependability. The mental act expressed in all such cases is an Annahme. Finally when a man uses a sentence which expresses a judgment and we understand him we do not as a rule either make a judgment like his or make a judgment about his judgment. We simply make an Annahme with the same objective as his judgment.

The third chapter deals with Objectives. These are the direct objects of acts of judging and of Annahmen. They are objects of higher order. In general a judgment or Annahme needs a presentation of an object as its foundation. This object we can if we like call the indirect object of the judgment. But it is best to say that the objective is what is judged and the indirect object what is judged about. Take the judgment that grass is green. What is judged is 'that grass is green'; and this is the objective. But the judgment is founded on ideas of grass and of green. And grass, which is what is judged about, is the indirect object. But the objective of one judgment or Annahme can become the indirect object of another. In 'it is certain that grass is green' what is judged to be certain is neither grass nor green but 'that grass is green'. Hence 'that grass is green' which is the immediate

object or objective of the judgment ' grass is green ' is the indirect object of ' it is certain that grass is green '. It is clear that when objectives become indirect objects of fresh judgments they must often be presented by Annahmen and not by judgments. This is obvious in such a case as : It is false that $2+2=5$.

Objectives do not exist but subsist. And they are timeless. Meinong has no difficulty in showing that arguments against the latter view rest on a confusion between the time involved in the objective and the time at which the judgment of it happened. It is important to be clear on the relation between subsistence and truth. Apparently all subsistent objectives are true ; for he calls them facts. On the other hand some subsistents are not capable of truth or falsehood ; *e.g.*, the difference between red and blue subsists, but it is neither true nor false. And it looks as if false objectives, though they do not exist or subsist, must have some third kind of being. Yet it will be a kind that has no negative. Meinong refuses to come to a definite conclusion about it and decides to call it by the non-committal name of Aussersein.

Another characteristic of objectives is that they have modal qualities. It is perfectly true that there are also differences in the correlated contents of the acts that grasp objectives and that we *may* reach differences of modality by reflecting on these acts. But we can and do generally learn about the modality of an objective by inspecting the objective itself. Meinong's own account of modality is complicated, and I do not feel confident that I have understood it.

He distinguishes certainty and evidence in the judgment and says that they correspond to actuality in the objective. He then tries to prove that certainty belongs to the act and evidence to the content. For, he says, that belongs to the content of a psychical state which cannot change while the object remains the same. Now certainty can change in degree whilst the objective remains the same. But evidence belongs to content ; for an evident judgment cannot grasp any but an actual objective. Yet further refinements are introduced. There is evidence for certainty and evidence for probability. The former alone corresponds to actuality, the latter to possibility in the objective. And again there is another kind of evidence, *viz.*, Rational Evidence which corresponds to necessity in the objective.

I find it difficult to see how a theory which accepts objective necessity can admit possibility as a quality of objectives. If a proposition be true its falsity is impossible. If it be false its truth is impossible. But it must be either true or false. Hence for any proposition either its truth is impossible (and its falsehood therefore necessary) or *vice versa*. Where then is there room for objective possibility if objective necessity be granted ? There is also a difficulty about evidence and certainty. It is clear that both are meant to be psychological. Yet the phrases ' evidence for certainty,' etc.,

suggest that there is something purely logical about evidence. Again evidence is said only to exist in judgments that grasp actual objectives. If this be so we ought to be able by careful enough introspection to determine that a true judgment is true (though not that a false one is false). Meinong in fact seems to hold that a truly-evident judgment cannot have a non-actual objective; but this is one of those statements which are not very helpful because if false they could not be refuted. For if an apparently evident judgment came to be doubted Meinong would merely have to say that it had never really been evident. The mixture of logical and psychological elements in certainty and the evidence for it which we noted above is not necessarily a fault in Meinong, but is something typical of this very difficult subject. On the one hand certainty is purely psychological and can exist in any degree with the same objective; on the other hand there is a right degree of certainty which depends on the nature of the objective judged and on other objectives. The mystery of this state of affairs is not lessened by introducing a kind of logico-psychological hybrid in the shape of evidence for certainty or for probability between the logical subsistent objective and the psychical existent act.

In Chapter IV. are enumerated these cases of Annahmen that can be found by direct inspection. He finds them in games, art, lies, questions, and desire.

In Chapter V. Meinong considers what kinds of acts can present objectives. Of course judgments and Annahmen can do so; but not, he thinks, ideas. This question we have discussed earlier, but there remain a few points to notice. He insists on the extreme difference between the objects that are admitted to be objects of ideas and objectives; *e.g.*, between a mountain and the existence of a mountain. But does not this difference mainly lie in the fact that a mountain can be the object of a perception whilst the existence of a mountain cannot? But not all objects of ideas are perceptible. The British Constitution can presumably be the object of an idea, even if, as we shall see later Meinong holds, an Annahme be also needed to grasp it. Yet the British Constitution is not so different from the existence of a mountain as both are from a mountain.

Meinong next tries to prove that objectives cannot be indirectly grasped by ideas. By this he means that if you try to grasp objectives through descriptions such as 'the objective which is grasped by the judgment J,' you will still need something more than ideas. For you will need a direct acquaintance with the judgment J; and J, being a psychical state, cannot be the object of an idea. This last opinion depends on Meinong's theory of introspection already mentioned.

According to Meinong we do not desire objects but objectives. When we say that we desire X we really mean that we desire X's existence. And such objectives must be grasped by Annahmen and

not by judgments. If we judged that X existed we should not desire it, though we might of course desire its continuance. But could we not be said to desire at t_1 the existence of X at t_2 although we judge at t_1 that X will exist at t_2? If not, it will follow that nothing which we believe will exist if and only if we desire it ever will exist. For if we hold this belief and desire it we shall believe that it will exist, and then we shall cease to desire it and it will never exist if our belief as to the conditions of its existence be true. There is too a further difficulty about the doctrine that we desire objectives which Meinong does not seem to notice. When we say that we desire X it is reasonable to hold that what we really desire is the existence of X, and it is true that the latter is an objective. Yet X never may exist. In that case 'the existence of X' is not actual. If false objectives do not subsist in some sense it will follow that we have literally desired nothing unless our desire is one that will be fulfilled. If on the other hand they do subsist we seem forced to say that it is not the existence of X that would satisfy us but the actuality of X's existence; hence it is the actuality of X's existence that we really desire. But the actuality of X's existence may itself be false (and will be so if X's existence be not actual); hence we seem to have started on an infinite regress in trying to state what we really desire.

The next chapter which deals with Operations on Objectives is very important, for it is largely concerned with the nature of inference. When we infer q from p 'persuasion' is in some sense conveyed from J_p to J_q. This however cannot simply mean that the judgment J_p is a part of the cause of J_q. For this may be the case when we do not say that we have inferred q from p. Moreover we directly perceive that p is the ground for q, whilst we can only find out by experiment what causes anything. Meinong compares the conveyance of persuasion from one judgment to another to the production of an evident judgment of comparison by the mere presentations of the terms compared. In inferring 'A is C' from 'A is B' and 'B is C' the judgments of the last two objectives stand in the same relation to the judgment of the first as do the presentations of X and of Y to the evident judgment of 'X differs from Y'. This peculiar relation is expressed by saying that we judge A is C 'in view of' (im Hinblick auf) our judgments of the other two objectives. The experience of 'judging in view of' is ultimate. He compares this relation to that between desires when we desire the means in view of an existing desire for an end.

But sometimes when J_p is evident we believe J_q to be evident when it is really false and some fallacy has been committed in inferring q from p. And again when we do not think J_p or J_q evident a formally correct inference of q from p seems to give some evidence to q. We say at least that it is evident that q really follows from p. As evidence for Meinong implies truth he cannot count this as real evidence, but calls it quasi-evidence. Here there

is considerable departure from the First Edition where quasi-evidence was called relative evidence, and true evidence was treated as a special case of it. Meinong's present position is that in formally correct arguments when the truth of the premises is not asserted both premises and conclusion are angenommen, but that Annahmen can have mediate evidence as well as judgments. There are great difficulties about this view and Meinong discusses them on page 350.

He has to suppose that Annahmen can have mediate but not immediate evidence. And this is in great contrast to judgments which only get their mediate evidence from being judged in view of others that are immediately evident. Meinong's reply is that of the two elements in mediate evidence (*viz.*, evidence of premises and judgment in view of them) only the analogue of the latter may be needed for Annahmen. In fact an Annahme can become evident in view of another that is not itself evident. This seems to me a difficult position to maintain. But if we distinguish supposing from entertaining I think we may fairly hold that whilst entertainment has no evidence, suppositions can have both immediate and mediate evidence. But there seems a general difficulty about Meinong's theory of evidence. If we remember that evidence belongs to content we see that it must be uniquely correlated with some quality in the objective:—degree of possibility presumably. The latter cannot alter. Yet if we judge the same objective in view of premises of various degrees of immediate evidence the mediate evidence of the judgment of the conclusion will vary. And so the correlation between the evidence of the judgment and the degree of possibility in the objective disappears.

Meinong rejects the view that a piece of reasoning like a syllogism which would be an inference if its premises were asserted is nothing but a hypothetical proposition with a complex antecedent when they are merely angenommen. His ground for this seems to be that we say 'suppose M is P' and 'suppose S is M' (expressions indicative of Annahmen) but add 'then S *is* P'. If this distinction is to be maintained it ought to be applied to hypotheticals with simple antecedents too. The true hypothetical ought to be 'if A were B C would be D,' and the non-inferential form of the syllogism 'if M were P and S were M then S would be P'. But I doubt if these verbal distinctions express any real logical difference. We tend to use the latter form when we believe that S is not P, and of course it is true that this is a case where S is P can only be angenommen, and where inference is useless since we know the relation of S to P apart from the syllogism. It is the latter consideration that really distinguishes the two forms. In both cases where the premises are merely angenommen there is no inference and the conclusion is angenommen too. But when it is expressed in the form S *is* P we mean that we are ready and willing to pass from Annahme to judgment if we get the chance to

infer; whilst, in the conclusion S would be P, we mean that we have already made up our minds that S is not P and do not want or expect to infer anything.

We now come to Meinong's treatment of the hypothetical judgment itself. He says that if it be an ordinary judgment it is strange that it has no contradictory. But what he calls strange seems not to be true. The contradictory of If p then q is Though p yet not q. Meinong's own view is that in a hypothetical judgment what is really asserted is the consequent as modified by the antecedent. 'If a triangle be isosceles the angles at its base are equal' becomes 'The angles at the base of an isosceles triangle are equal'. This substitution is an old friend, and I do not see that Meinong has cured it of any of its weaknesses. Of course it only applies at all well to conditionals as distinct from true hypotheticals, *i.e.*, its propositions of the form $\phi x), \psi x$ as distinct from $p)q$. If we apply the substitution to 'If it rains I shall get wet' we obtain 'I who am in the rain will get wet'—a proposition which either fails to express my meaning or must reintroduce a hypothetical if I am in the dry. Meinong is more troubled about existential hypotheticals. If you reduce 'if Gods exist divine works exist' to 'the works of existing Gods exist' there is the same difficulty as before in case no Gods do exist. Meinong's only solution is to point to other existential propositions about non-existents: *e.g.*, 'an existent round square exists'. This proposition, he says, is true, although round squares do not exist. A contradiction and a round square seem a flimsy basis for a theory of the hypothetical judgment.

The theory of the modified consequent does not however exhaust his account of hypotheticals. He thinks that the modified consequent is asserted in view of the antecedent which supplies conviction, or, in some cases, evidence. There seems to be a difficulty in reconciling this with some that has gone before. Hypotheticals are not always judged, they are often merely angenommen. By analogy this must mean that the modified consequent is angenommen in view of the antecedent, and gets some evidence from it. But we can suppose the proposition 'if a triangle be isosceles the angles at its base are unequal'. Can we possibly hold, as we must do on Meinong's theory, that the supposition that the angles at the base of an isosceles triangle are unequal gains evidence when supposed in view of the equality of its sides?

There is more to be added, however. If the hypothetical judgment be only an operation ending in a categorical judgment why call it a special kind of *judgment?* Is there no special experience which the verbal form expresses and whose object is its meaning? Meinong thinks that there is. The various experiences themselves which grasp the objectives and end in the Judgment *can* be used too to grasp an objective of higher order. This is the complex of the two objectives related by the 'if-relation'. The hypothetical judgment is not itself the recognition of an if-relation, but the

meaning of a hypothetical proposition is a complex related by that relation and capable of being grasped.

In the IXth Chapter Meinong considers the general question of the presentation of objects. He thinks that Annahmen are largely concerned in this. He holds that in the First Edition he was obsessed by a prejudice in favour of the existent. He therefore reproduces what he said there with the warning superscription of Existential View and adds his corrections under the heading of Non-existential View. The existential view is that the mediate objects of true affirmative existential judgments exist. A false affirmative existential judgment has no mediate object; but we may call its mediate object that which it would have if it were true. A similar expedient is adopted for true negative existential judgments. But in this case how can we strictly say that all judgments *have* mediate objects? His first suggestion is that the objects are presented by ideas, and that ideas have nothing to do with truth or falsehood. Still the ideas on which a true negative or false affirmative existential judgment is based will have non-existent objects. He has to overcome this difficulty by the notion of potential objectivity. This must be a psychical disposition. But then a disposition, though it is something, is not something that is presented, whilst every idea does seem to present an object. His final solution on the existential view is as follows. When we make a positive existential judgment we find on introspection the experience of grasping a mediate object, whether the judgment be true or false. Why not suppose then that this experience is always due to the existence of something like a judgment? When our judgment is a false affirmative or a true negative the experience of grasping an object is due to the existence of a positive Annahme. Further we must suppose that we only experience an idea as presenting an object when it is followed by an Annahme that the object exists. If this be so it will explain how contradictions like round squares can apparently become mediate objects; for Annahmen are indifferent to contradictions. And finally the very fundamental character which positive Annahmen now assume is compared with the essential positivity of the suggested Aussersein.

I shall not criticise the above theory, but will pass at once to the Non-existential View which Meinong now holds. The existential view held that ideas of existents actually grasp existent objects, and tried to explain the experience of grasping an object in cases where what seems to be grasped does not really exist. The present view maintains (*a*) that every judgment has a mediate object whether that object exist or not. This amounts to a reiteration of the commonly accepted view which we express by saying that it is necessary to 'know what we are talking about'. But (*b*) it holds that no idea alone ever grasps an object even when the object exists. Having an idea is a passive state, whilst grasping an object is an action; hence the former is not enough for the latter. And it is

clear that the kind of ideas called sensations very often do not grasp objects although they can be used for that purpose. Finally Meinong uses an argument based on his theory of introspection. The content of an act and its object are uniquely correlated. But, if Meinong's theory of introspection be true, the content of an idea can be used both to grasp its so-called object and to grasp the idea itself. Hence in at least one case something must be added to the content of the idea if the unique correlation of content and object is to be retained.

This addition Meinong calls 'intending' (Meinen). I intend X by means of the positive Annahme that X exists or that X subsists. If an existential judgment be affirmative and false or negative and true still the objective of this Annahme subsists and the object X is grasped in it. There seem to be two difficulties in this theory. Firstly it does not help us over non-subsistent objects. Suppose that the objective that X subsists be false then, though it may be true that the objective has some kind of being and can be angenommen, this does not bring us any nearer to intending X, for there seems to be no X to intend. In fact an objective asserting that a non-subsistent object subsists must be itself false. If false objectives have some kind of being so may non-subsistent objects and the by-way through the objective is unnecessary. If false objectives have no kind of being then the expedient is useless, for how can they be grasped? The other difficulty is more general. Is it not just as necessary to grasp an object in order to make an Annahme about it as in order to make a judgment about it? If so the theory involves a vicious infinite regress of positive Annahmen.

In Chapter VIII. Meinong considers the difference between intuitive and non-intuitive ideas. Whenever you have an intuitive idea you have a complex object. Now you can have a non-intuitive idea of the same object. Hence the difference must lie in the fact that the contents of the ideas of the elements of the complex are differently related according as your idea of the complex is intuitive or non-intuitive. When the idea is intuitive Meinong calls the contents of the ideas of the elements unified (zusammengesetzt). When it is non-intuitive he calls them united (zusammengestellt). Now a non-intuitive idea whose elements are the ideas of X and of Y can grasp either the object X that is Y or the object X that is not Y. But an intuitive idea can only grasp the former. Further *no* idea alone can grasp the latter; a negative judgment or Annahme is needed. So that the final distinction is that an intuitive idea of a complex is one that can only give rise to an Annahme or judgment asserting one element to inhere in the other, whilst a non-intuitive idea can give rise to either a positive or negative judgment or Annahme.

Meinong chooses to treat separately as a more complicated case the question of the presentation of two terms in relation, *e.g.*, red differing from blue. Whether there be any difference between this

and the earlier cases depends on whether inherence be an ordinary relation. He argues here that, although ideas of red and of blue and of difference are necessary to present red differing from blue, they are not sufficient. He uses an argument familiar to readers of 'The Principles of Mathematics' about the distinction between a relation as such and a relating relation. But he tries further to prove the general proposition that if a number of contents separately be not adequate to a given object no combination of them can be so. By a content being adequate he means that it gives rise to and justifies a statement about the object. Unfortunately he does not tell us what the statement must be; but we may fairly suppose that in the example it is that red and blue differ. Now the relation between content and object, he says, is an ideal relation, and those between contents real ones. An ideal relation is one which alone can relate terms that subsist but do not exist, though it can relate existents too. It is a property of such a relation that if it relates existents it only ceases to hold through changes in its terms and not through changes in their real relations to other existents. By definition the relation between content and object is ideal when the object only subsists. (Meinong seems to think that it also follows when the object is an existent; but this is of course only a plausible assumption.) Hence he argues that if single contents be not adequate to a given object no alterations of their real relations will make them so.

This argument does not seem to me to be cogent. It only proves that the separate contents will not become adequate through changes in their real relations, and not that a complex of these contents related by certain real relations may not be adequate to an object to which none of them separately was adequate.

At the end of this chapter Meinong distinguishes two kinds of intending. You may intend an object not merely by supposing or entertaining the objective that it exists or subsists, but by doing the like with objectives that assert qualities of it. He calls the former Seinsmeinen and the latter Soseinsmeinen. We may call them direct and indirect intending respectively. So far as I can see indirect intending corresponds closely to what Mr. Russell calls knowledge of description. But what exactly is the objective angenommen when we indirectly intend an object? It is clear that it must be a proposition. On page 273 Meinong calls 'the mountain is golden' the objective by supposing which we indirectly intend 'the golden mountain'. By analogy I take it that the objective angenommen in indirectly intending 'the discoverer of Radium' would be 'he discovered Radium'. But the phrases 'he' and 'the mountain' are obviously incomplete. We ask immediately: Who? and What mountain? And these are just the questions that ought not to arise if by supposing these objectives we have indirectly intended the objects. Surely what must be angenommen is not 'x is golden and a mountain' or 'x discovered

Radium,' but 'there is an x such that x discovered Radium' and 'there is an x such that x is golden and a mountain'. But then we have got back to Seinsmeinen.

I shall say very little about the IXth Chapter, because it is of less general interest than the others, consisting as it does largely of a polemic against Von Ehrenfels' views of desire and value. It is only necessary to note that Meinong holds that there are psychical states which stand in the same intermediate position between ideas and desires or ideas and feelings as do Annahmen between ideas and judgments. He holds further that there is a general law about the causation of desires, which runs as follows. In desire we present an object, we then suppose the objective that it exists. This Annahme causes a quasi-feeling, and, if the latter be pleasurable it causes us to desire the existence of the object.

The last chapter consists of a summary of the results of the work. The book as a whole can safely be described as a model of acute and profound investigation into the hardest and most fundamental questions of philosophy.

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Formal Logic: A Scientific and Social Problem. By F. C. S. Schiller, M.A., D.Sc. London: Macmillan & Co., 1912. Pp. xviii, 423. Price 10s.

Dr. Schiller's book characterises itself as a challenge at the very outset by its dedication 'to the memory of the last great liberator of the human spirit, William James'. It is a sustained attack on what Dr. Schiller regards as the futility, the verbalism, the self-contradictoriness of the traditional theory of Formal Logic. And what gives a keener point to his criticisms is the fact that, from the position of Formal Logic in the academic curriculum of British Universities (to go no further afield), it is taught to larger numbers of students than any other philosophical subject, and that to many of these students it is the only glimpse of philosophy they ever get. Dr. Schiller thus challenges not merely a theoretical tradition of great antiquity, but also a long-established educational practice. It is but natural that a book of a character so highly controversial should have given rise to the most diverse and conflicting estimates. Some critics have hailed it as marking the opening of a new epoch in the study of Logic. Others have shrugged their shoulders over it and declared that Formal Logic has long ago been weighed and found wanting, and that this reopening of a *chose jugée* serves no good purpose. Both these estimates may well be extreme, yet which of them we shall consider to be nearer to the truth, will depend wholly on the view we take ourselves of the position and value of Formal Logic. This, then, is the first question which we

must settle in order to gain a standpoint from which to appreciate the character and success of Dr. Schiller's criticisms.

The position of Formal Logic, when one comes to think of it, is in many ways curiously paradoxical. It is, for instance, as Dr. Schiller points out (p. xi), not easy to find an explanation, on grounds either of common sense or of education, for the fact that the prescribed curriculum of many Universities demands the expounding, *inter alia*, of the 'theory of scientific method' to literary students, most of whom know no science, whilst the professed students of science are left without any logical training whatever. It is a mystery how the average member of a 'Pass' class in Logic is to understand the meaning of scientific methods, seeing that he has no practice in, or experience of, their application, and no acquaintance with the facts to which they are to be applied. For no one will, surely, contend that the odd examples to be found in text-books can really fill that gap or produce a genuine understanding of scientific ways of thinking. Speaking both as an examiner in, and as a teacher of, the subject, with experience of several Universities, I have no hesitation in saying that the average student carries away only the most superficial grasp of the nature of scientific inferences. In fact, his understanding would be more accurately described as a misunderstanding.

Again, the 'deductive' part of Logic is full of traditional survivals which are taught without that historical background which alone gives them meaning or makes them really intelligible. Those parts of the traditional doctrine which go back to Aristotle, are a mere fragment of Aristotle's whole theory of Logic, and moreover a fragment not only torn from its relation to Aristotelian science and from its context in Aristotle's theory of knowledge and whole philosophical system, but also transformed by the handling it has received from mediæval logicians. We shall, most of us, agree that the importance and meaning of, *e.g.*, the theory of the categories, or of essence, property and accident is not easily made intelligible apart from its historical background, and that the application of these conceptions to the ways of thinking of modern scientists is, if not impossible, little better than a *tour de force*. Again, there are good historical explanations for the fact that neither Aristotle nor the mediæval logicians had any difficulty about assuming the existence of 'immediate' premisses required for the syllogism: but for us this is the very difficulty which stultifies so much of the theory of the syllogism.

It is difficult to teach even what Mr. Alfred Sidgwick calls the 'application' of Logic as a set of rules for the conduct of an argument, now that the former university practice of set disputations has fallen into disuse. In fact, Formal Logic has ceased to be the recognised court of appeal even among philosophers. Kant could still clinch his exposition of the 'Paralogisms' of Pure Reason by exhibiting them as syllogisms vitiated by the Sophisma Figurae

Dictionis. Yet even in Kant's syllogisms no one who has not gone through the 'matter' of the argument would discover the fallacy from an inspection of the 'form' alone. And if the practice of annihilating an opponent in debate with the technical terms of Logic has gone out of fashion, the reason, I suppose, is that we perceive more clearly how much the soundness and relevance of an argument depend, not on its formal correctness, but on our grasp of the material nexus.

And, lastly, what is the opinion which philosophers hold of Formal Logic? It is the despised Cinderella among philosophical studies. All 'philosophical' logicians criticise it and substitute for it either Symbolic Logic, which is the nearest way to making Logic consistently Formal, or, more commonly, the Idealistic Logic which, on the basis of Kant and Hegel, has been developed by Sigwart and Lotze, by Bradley and Bosanquet. The typical estimate of Formal Logic from this latter standpoint is well expressed by Bosanquet (*Essentials*, p. 99): 'The educational value of elementary formal Logic consists chiefly in the exercise of paraphrasing poetical or rhetorical assertions into this typical shape (of the logical proposition) with the least possible sacrifice of meaning'. In short, as the late Professor Adamson used to say, the value of Formal Logic is merely 'propædeutical'; it is a good drill for the students in the handling of thoughts, an exercise in accuracy of thinking, a training in ingenuity and acuteness of analysis, and in consistency and orderliness of reasoning. I should myself agree, at any rate for 'deductive' Logic, that a fair case for the educational value of Formal Logic can be made out on these lines. But it is, I think, worth pointing out (1) that if we were consistent in teaching of Logic only so much as has 'propædeutic' value, *a very considerable part* of the traditional doctrine would have to be left out; indeed, it is a curious speculation how much we should have a right to retain if we applied Bosanquet's dictum, quoted above, with any strictness. (2) But, secondly, so far from telling our students that we are only going to give them a dose of mental discipline, text-books and lecturers alike begin by telling them that Logic is the 'science of true thinking' or 'of the Laws of thought' or 'of the structure of knowledge'! Surely, if the value of Logic is purely propædeutic, and if, admittedly, it is not, in the form in which we teach it, the science either of true thinking or of the structure of knowledge, we should cease to make a claim for Formal Logic which may once have been true, but which is true no longer. Else, alike the consistency and the honesty of our procedure will be questionable. And we may even be glad that, in spite of all logical training, the average student is too unthinking to find out the false pretence, or too much pre-occupied with passing his examination to mind if he does.

Anyhow, there are, in the main, two possible estimates of the value of Formal Logic. We may take it (*a*) as a mere propædeutic exercise, or (*b*) as what it traditionally claims to be, *viz.*, the

science of true thinking, at least in so far as 'truth' can be treated as dependent on 'form'.

When we apply this result to the attitude of modern philosophers towards Formal Logic, we shall find, I think, (1) that with few exceptions, philosophers are agreed that Formal Logic as a science of true thinking is a failure, though they disagree very profoundly in their reasons for this conclusion and in the remedies they propose. And (2) if we may argue from the retention of Formal Logic in the academic curriculum, they are agreed also that Formal Logic has a 'propædeutic' value which is not destroyed by what Dr. Schiller calls the 'verbalism' of Logic, *i.e.* taking propositions and inferences apart from their 'context' and, therefore, from their 'actual meaning as used,' and by the help of arbitrary conventions of analysis investing them with average 'dictionary meanings'.

And, now, when we turn to Dr. Schiller's estimate of Formal Logic under these two heads we get the somewhat paradoxical result, (1) that as regards the failure of Logic as a science of true thinking he differs from the majority of his fellow-philosophers only in that his condemnation is more sweeping and comprehensive. The whole burden of his contention, the chief point of his book, is that Formal Logic fails all along the line to substantiate its traditional claim. Hence (2), as a corollary, Dr. Schiller would hold that the 'verbalism' and 'inconsistency' which vitiate Formal Logic as a Theory, destroy also any value which may be claimed for it as mental discipline. He would argue that it should be possible to have a body of logical doctrine which is not only good discipline, but *also* a genuine theory of thinking in the sense of truth-seeking and truth-finding.

Here, then, we have *one* definite issue about the educational value of Formal Logic,—an issue certainly very much worth discussing. But if this were the only issue, we might well say that Dr. Schiller need not have written a bulky book to raise it. Perhaps, then, there is more in Dr. Schiller's arguments on the first issue than the unwary reader at first perceives. For, at first sight, Dr. Schiller's arguments seem relevant and effective only against those, if any such there be, who still accept Formal Logic at its traditional face-value. Right through his book Dr. Schiller *does* argue as if Formal Logic did not survive merely as a piece of academic discipline, but were still accepted by philosophers as a satisfactory theory of thought. But, philosophically, as we have seen, that is to argue against a figure of straw. And Dr. Schiller cannot be surprised if most critics tell him that they have long abandoned the assumption about the value of Logic which he attacks, and that, therefore, his critical blows land in the air.

To this, I suspect, Dr. Schiller's reply would be that, though 'Formal Logic' has been disowned, 'Formalism' has remained, and is, in fact, vitiating *all* contemporary Logic, and most fatally and insidiously the 'Idealistic' Logic which professes to have

escaped Formalistic defects. The fact is that, under the guise of a criticism of traditional Formal Logic, Dr. Schiller is really attacking most of the fundamental doctrines of every kind of Modern Logic. His theory of 'meaning' in principle condemns all Symbolic Logic; he attacks the Idealistic principle that nothing but the whole truth is wholly true; he confronts Intuitionists of all shades with the difficulty how they propose to distinguish between true and false intuitions; he finds fatal Formalism in every theory of Universals which treats them apart from their 'application' in which they are 'particularised'; he urges against all who believe in 'ideals' of knowledge that thereby they make judgment 'psychological' and 'extra-logical'. These are some of the points of vital concern to modern logicians which, by a curious hide-and-seek method, are implicitly attacked in Dr. Schiller's criticism of Formal Logic. But if *these* are the issues which Dr. Schiller really means to raise, why this roundabout method? It is surely a tactical mistake to attack the vice of Formalism in its least vigorous and flourishing embodiment. What, we must ask, does Dr. Schiller gain if the error, which he pursues with so much acuteness and persistence, continues to flourish in *other* forms? Hence we cannot but regret that Dr. Schiller has not rather devoted his subtle and brilliant powers of criticism to an examination on their merits of the logical theories which actually are held among philosophers at the present day. For instance, Dr. Schiller might have made it his main task to examine that kind of 'Idealistic' Logic which is, perhaps, best represented in Bosanquet's *Logic*. There are, indeed, a number of passages in Dr. Schiller's book from which it is easy to infer that he would consider that doctrine also as infected with 'Formalism'. But the fact remains that the line of thought which Bosanquet, amongst many others, represents, took its origin professedly in a criticism of Formal Logic on the very ground of its 'Formalism,' and that it aims explicitly at a reconstruction which shall more truly exhibit the movement and the structure of thought in its striving after knowledge. Whatever the new 'Humanistic' Logic may be which Dr. Schiller may be expected to give us, it is not by comparison with Formal Logic, but by comparison chiefly with this Idealistic Logic that we shall judge it. The more is the pity that Dr. Schiller has not met the most formidable rival of his own theory in the open field.

This being the case, most philosophical readers of Dr. Schiller's book will be interested, not so much in the details of his criticism as in the hints and glimpses of *positive reconstruction* which he gives us. We are anxious to know what alternative to 'formalistic' logical theories Dr. Schiller can offer us on a 'Pragmatic' or 'Humanistic' basis.

To begin with, the definitely novel critical achievement for which Dr. Schiller claims credit is that he traces all the defects of Formal Logic to one initial and fundamental error of *principle*. Formal

Logic fails, root and branch, because it springs from a false methodological assumption, *viz.*, the assumption that *truth* has an aspect of purely 'formal' validity which can be treated in complete independence of 'material' truth or truth in point of fact. In other words, the separation of Form and Matter is fatal the moment we come to questions of Truth and Error, for in the recognition of either there is always, at bottom, operative positive knowledge of the *subject-matter* with which we are dealing. The novelty and the value which Dr. Schiller claims for his examination of Logic consist just in the thoroughness and relentless persistence with which he tracks down the fatal consequences of this false abstraction through all the ramifications of the traditional logical doctrine. He shows, successfully, as I think, in most instances, how the attempt to maintain the initial abstraction from 'material' knowledge everywhere stultifies logical analysis, divorces it from the actual procedure of human thought, makes its results meaningless. inapplicable, misleading, and even—for that is the inevitable fate of all false abstractions—turns its striving after consistency into inconsistency. Or, alternatively, Dr. Schiller shows that where logicians have, in more or less half-hearted manner, attempted to escape from these consequences of their formal standpoint, they have done so by admitting 'material' elements into their analysis and thus contradicting their own formal assumptions. Whilst upholding an ideal of consistency, they have practised a happy inconsistency.

One might summarise the net result of Dr. Schiller's criticism by saying that the traditional doctrine, even when presented, with doubtful consistency, in the least abstract and formal way, is in a position of unstable equilibrium from which it can escape only along one of two ways. It might either make itself consistently formal by becoming frankly symbolic. But that is a line which not many logicians are prepared to take; and, in any case, from Dr. Schiller's point of view Symbolic Logic shows the defects of 'Formalism' in the most exaggerated way (pp. 390-1). Or, Logic might abandon its initial abstractions and frankly cease to be formal. And this is the way which Dr. Schiller would recommend.

How, then, does he propose to effect the reconstruction? We get our first clue from a corollary of the abstraction of 'Form' from 'Matter' which Dr. Schiller might with advantage have emphasised more clearly at the outset of his work. He opens by challenging explicitly only the notion that a 'formal' truth can be reached independently of 'material' considerations, but right through his work there runs criticism of a *second* abstraction, which at the end (p. 374) is explicitly put alongside of the former, *viz.*, the abstraction from 'psychology' and 'from the actual context in which assertions grow up, *viz.*, the time, place, circumstances, and purpose of the assertion and personality of the assertor'. With polemics against this abstraction readers of Dr. Schiller's previous works are, of course, amply familiar. I have called it a 'corollary'

of the abstraction of Form from Matter, because the nexus of thought is that the 'material' truth of an assertion or argument cannot be discussed without knowing exactly what the assertor *means*, and that meaning cannot be apprehended except in its context of purpose and interest, which in turn are relative to the particular problem or situation with which the thinker is trying to deal. This emphasis on meaning, and on the *selective* character which it owes to interest and purpose, seem to me most valuable, especially when one thinks of the arbitrary way in which, in 'formal' analysis, out of the many shades of meaning, emphasis, and implication which a given form of words may convey, one is seized as 'the' meaning and made the basis of logical analysis. And few, I imagine, will object seriously to the general terms of the view summarised above. But it is perhaps worth pointing out to Dr. Schiller that this immunity from criticism is due to the generality of his statements. It might be very different if Dr. Schiller had given us details. And there is particularly one point on which I feel misgivings. Dr. Schiller makes a very strong case against the fundamental abstractions in Formal Logic, but at times he exaggerates his polemic to a point where he seems to suggest that Logic should *not abstract at all.* And that may well make us pause. Logic, surely, must simplify somewhere, if its task is not to become unmanageable. It must practise some kind of methodological abstraction, else its subject-matter will coincide with all the sciences on the one side and with psychology on the other. From the former implication one shrinks appalled; and the latter gives rise to three questions, (*a*) whether a logician can ever know fully the context and purpose of any thoughts except his own; (*b*) whether there are not in the psychological context many elements which are *irrelevant* to the thought of the moment; and (*c*) whether there is not much thinking so-called which the logician is perfectly entitled to neglect.

To this third question, at any rate, I gather that Dr. Schiller's answer would be 'Yes'. For he is never tired of insisting that much so-called thinking is not properly thinking at all; that for 'real' or 'genuine' thinking we must have a basis of doubt, *i.e.*, a definite problem to the solution of which we bend all our intellectual energies. This alone gives 'purpose' and 'relevance' and 'meaning' to our thinking. Now, if this is the kind of thinking with which Logic is more especially concerned, to the exclusion, I take it, of mere memory, play of association, purposeless day-dreaming, etc., are we, perhaps, to look upon this distinction as supplying the principle which defines the subject-matter of the New Logic? If so, however valuable the emphasis on the forward-looking attitude of the researcher and problem-solver may be, is there not just a danger of underrating the amount of quite genuine thinking that has for its purpose merely the rehearsing and maintaining of relatively stable systems of established truths? To these, and similar questions, Dr. Schiller owes us an answer.

Another striking point about Dr. Schiller's positive teaching is his emphasis on the *experimental* character of all genuine thinking. To think, *i.e.* to seek and to propound solutions for problems, is to him a fine adventure. It means the constant taking of risks,—risks of theoretical failure, risks of practical defeat. There is no absolute certainty for human thinkers, though we can generally attain sufficient certainty to live by. That is the justification of faith, of trusting, in speculation no less than in action, to conclusions which are not beyond doubt, *i.e.* which would have to be called 'formally invalid'. In greater or less degree all that we call 'truth' is provisional and liable to reinterpretation and modification. The 'laws of nature' which our sciences formulate have grown out of successful guesses on often slender evidence; they are hypotheses established by verification and held subject to the continuance of verification; they may even be 'postulates' with which we confront our world and which—again with both a theoretical and often a practical risk—we may refuse to abandon, even when some kinds of experience contradict them. There is a risk of failure in generalising from one case to another, just as there is always a risk in applying any general law to a particular case, because the degree of identity which would justify the inference may not be sufficient—a fact which we often discover only when it is too late. There is no *a priori* high-road to truth. There is only the adventure of the human mind, striving through trial and failure to master the world of its experience.

From this point of view we can also best understand what Dr. Schiller says about 'Postulates'. They are still described as 'voluntary' and even as 'arbitrary,' but those who would suspect in these phrases the cloven hoof of an irrational will may take comfort from the passage (p. 245) in which Dr. Schiller speaks of 'the great postulates of rationality, such as causation, number, time, self, God, freedom, and immortality'. The undeniable extravagance of statement which gave offence to many in 'Axioms as Postulates' has disappeared, and the change is all for the better. 'Postulation' is now soberly described as 'the psychological procedures by which suggestions are utilised and analogies recognised' (p. 242) and as 'all spontaneous reactions which go beyond their data and yield something *new* that was not *necessarily* involved in the data' (p. 243). It is clear from this passage that the much-criticised 'arbitrariness' of postulation means no more than the readiness to rely, in theory and practice, on conclusions for which the evidence, as measured by syllogistic standards, is insufficient. A postulate is 'arbitrary' only because the traditional syllogism will not recognise anything short of absolute certainty as valid and legitimate. To accept, and to act on, probabilities must always seem irrational and arbitrary if we are to deny reason where we are still short of absolute certainty.

Some critics have objected: What has all this got to do with

Logic? What concern has truth which, in its own nature, must be final and absolute, with the limitations of human thinking? But this is to fall back on the very position which Dr. Schiller challenges. At bottom, the point at issue is just this: Should our theory of thinking be constructed from the standpoint of absolute truth or from that of the truth which is humanly attainable? Dr. Schiller has, I think, succeeded in making out a very strong case for approaching all logical problems from the standpoint of human thought engaged in the *finding* and *discovering* of truth, striving to extend its knowledge, delighting in the experiment and adventure of studying a problem and reaching *fresh* conclusions. Who will deny that this is the characteristic attitude, not merely of scientific research, but of all genuine thinking on any problem whatever? Nor, as we have seen, is this movement of thought in any blameworthy sense 'arbitrary'. It is not neglectful of evidence, nor contemptuous of reasons for and against. Rather it balances and weighs evidence delicately, but it is ready—and that is the characteristic point—even where the evidence is inconclusive and falls short of absolute assurance, to proceed to an intellectual commitment, at least *provisionally*, as the best step to further and better knowledge. The degree and kind of evidence which shall suffice for such commitment will differ widely according as we deal, *e.g.*, with an abstract science or with the 'truths' of morality or religion. We may even suggest that it would be only putting the same point from a different side, were we to say, that it depends on the degree of synthesis of the whole personality which is called forth by problems of varying depth and range. Without absolute certainty, we yet stake our faith, in every genuine assertion, on the stability of whole intellectual systems, in which more or less of our whole personality may be involved.

Thus, through and by means of his searching criticism of Formal Logic, Dr. Schiller does, I think, raise an issue of *principle* concerning the standpoint and method of Logic in general which is eminently worth considering. But I would urge upon Dr. Schiller most emphatically that by raising the question in this way he has, so to speak, pledged himself to give us a reconstruction of Logic on a 'Pragmatic' or 'Humanistic' basis. There is, on p. 378, a list of chapter-headings, as it were, of the New Logic which is very suggestive: '*Meaning* (and with it, of course, the communication and taking of Meaning, *i.e. Understanding*), *Truth, Error, Selection, Relevance*, and *Risk*'. Dr. Schiller cannot consider his task completed until he has carried out this programme in detail. And there should be the least possible delay. For Pragmatism has, perhaps, so far been too lavish of promises and too chary of fulfilment—spendthrift in criticism, niggardly in reconstruction. It has lived in an atmosphere of perpetual polemics. That is probably the reason why, for the last two or three years, the movement has not advanced much. To all appearances the impetus of its

first invasion of the philosophical realm has spent itself: now it is marking time rather than spreading. We have had too little opportunity to judge it by its own Pragmatic test, *viz.* its 'fruits' in the shape of positive theory. Had William James lived to complete his *Metaphysics*, there might have been no cause for this complaint. Now we look to Dr. Schiller, as the foremost representative of the movement, to give us that systematic presentment of Logic from the Pragmatist-Humanist standpoint for which no one is better qualified than he. After all, now that Dr. Schiller has piled up a mountain of the *débris* of the old Logic, he is not, let us hope, going to sit down on the top of it, a sort of sham Moses, and show us the promised land only from afar.

In conclusion, it is a pleasure to thank Captain H. V. Knox for a truly admirable index.

R. F. ALFRED HOERNLÉ.

Sophistik und Rhetorik, das Bildungsideal des Εὖ Δέγειν *in seinem Vërhältnis zur Philosophie des V. Jahrhunderts.* By H. GOMPERZ. Leipzig and Berlin: B. G. Teubner. Pp. vi + 292.

IT speaks volumes for the tenacious vitality of hidebound traditions in philosophy that it should still be necessary to continue to refute in detail views which have long been refuted in principle, and have never been able to make any show of a rational reply to their refuters. When three-quarters of a century ago George Grote first pointed out that the Sophists were *not* a school of philosophic theorisers, but a number of men independently practising a profession which the social and political conditions of their time had rendered important, he let the sunshine of commonsense into a fantastic fog of a philosophic tradition which it should have dissipated at once and for ever. But the organisation of the philosophic mind appears to be such that it is still possible to do good work by elaborating Grote's point and tracing the intimate connexion between the professional activities of the Sophists and their intellectual products, the opinions they advanced. So Dr. Gomperz, even though he follows after Grote, Henry Sidgwick, his own eminent father (whose recent demise will have been felt as a loss by every student of Greek philosophy), and a host of others, has contrived to find in the scanty and fragmentary reports about the Sophists the materials for an excellent book. In it he labours convincingly to show that *all* the opinions of the Sophists were relative to, and derivative from, their professional ideal of 'effective speaking'—a thesis which would appear probable to the verge of the truistic to reasonable men, were it not that the average philosopher, especially in Germany, still persists in regarding it as a wicked paradox. It is therefore by no means superfluous that Dr. Gomperz should work it out with such an abundance of learning, luci-

dity, acumen, ingenuity and good sense, in what is one of the most notable of recent contributions to the history of Greek philosophy.

He considers first the alleged 'nihilism' of Gorgias and acutely shows, by comparing the (probably genuine) declamations on Helena and Palamedes, that it rests only on a misunderstanding of a rhetorical ἐπιδείξις of a 'record paradox,' and was not meant seriously at all. He then passes to the cases of Thrasymachus, Antiphon, Hippias, the Anonymus Iamblichi, and Prodicus, with the uniform result that they were not seriously philosophers, and that their philosophic dicta were merely incidental to their professional exercises, and prove nothing about their real interests and convictions. He then comes to the *pièce de résistance*, Protagoras, whom he finds to be the only Sophist with philosophic capacity, and indeed one of the great thinkers of all time, who alone has given a philosophy of rhetoric (p. 258). The conclusion is formed by a chapter on Socraticism and Sophistic, in which the differentia of the former is held to consist in its adopting the ideal of a determination of scientific fact instead of that of artistic perfection of rhetorical form.

We may consider more fully the account of Protagoras, which occupies more than half the book, and is its most important, ingenious and original, as well as its bulkiest, part. As was to be expected from an unprejudiced inquirer Dr. Gomperz is quite free from the traditional delusion which calls Protagoras a sceptic on the strength of a statement that man *can* know everything that is. He also sees clearly that there is no intrinsic connexion between relativism and scepticism. His own interpretation of Protagoras is novel and highly ingenious. He denies that he was a 'subjectivist,' and successfully deduces the doctrine that all assertions are true from an extreme of objectivism. *I.e.* all assertions, however 'contradictory,' that are really made (as opposed to the mere forms of words which logicians call judgments) are true, in the sense that there really is something in the situation which provokes different minds so to formulate their various estimates. In a battle, *e.g.*, the situation may really be such as that a prudent man judges it well to retire and a bold man to advance, and either policy may be borne out by the event. There is thus provided a reasonable genesis both for the Protagorean doctrine of truth and a philosophic justification for the rhetorical technique of arguing both sides of a case, whether or not we follow Dr. Gomperz into the metaphysical background he assigns to the doctrine.[1] It is, however, a brilliant suggestion that the contention of Protagoras follows naturally from the metaphysics of Anaxagoras. If nothing is unmixed and absolute, if everything contains something of everything else, if there is gall in honey and honey in gall, it is true that all the antithetical λόγοι that a human mind can enunciate are *objectively* contained in every

[1] For a modern parallel we may cite Prof. Pikler's doctrine of the '*Gegensätzlichkeit des Erkennens*'.

subject, and so that all human judgments can be in this sense 'true,' without involving any formal conflict with the principle of contradiction. It will also follow that nevertheless it may be *better* to call a thing by the qualities which it exhibits to a greater extent, and that consequently the normal and prevalent opinion may be *better* founded in fact than the abnormal and paradoxical, so that it is possible to deny that the dictum 'all opinions are true' equates the values of all, and conducts to intellectual anarchy.

To establish this interpretation of Protagoreanism Dr. Gomperz relies chiefly on three sources. (1) A careful examination of the sophistic Διαλέξεις leads to the conclusion that they were composed shortly after 404 B.C., and therefore must have been modelled on the antithetical disputations of Protagoras. (2) A passage in Sextus ascribes to Protagoras a development of the Heraclitean doctrine of the Flux which *may* be connected as above with the physics of Anaxagoras. (3) The βοήθεια of 'Socrates' in the *Theætetus* is shown to be authentic Protagoreanism. Of course, as Dr. Gomperz sees, the nature of this evidence is such that no interpretation can claim to be more than probable, but no interpretation which puts together the evidence can fail to be an improvement on one that flies directly in the face of it, like the tradition, and Dr. Gomperz's is certainly distinguished by extreme ingenuity, and advanced in a refreshingly undogmatic way.

If, however, criticism in a similar spirit is welcome, it may be remarked, as regards the first point, that the Διαλέξεις can yield evidence as to the character of Protagorean dialectics only if we grant them the date they claim, and that the possibility of forgery in Greek scripts can never be dismissed as 'highly improbable' (*cf.* p. 138 *n.*). It is however probable enough that Protagoras composed antithetical arguments in the form supposed, *viz.*, by expounding them successively in his own person, while yet conveying his own opinion as to the side to which the balance inclined; for such a method is indicated by the nature of the case, and any good teacher would be likely to hit upon it.

Secondly, the evidence of Sextus naturally arouses suspicion, because of his habit of translating the views he expounds into the technical language of a much later age. Dr. Gomperz takes no offence at this. He prefers Sextus's version of Gorgias's skit περὶ φύσεως to that in *De Melisso Xenophane Gorgia*, and is not staggered by the fact that it contains explicit statements of the law of contradiction and of the Aristotelian doctrine of contraries, and so would compel us to revere Gorgias as an anticipator of Plato and Aristotle and an important figure in the history of logic. Sextus's version of Protagoras does not flaunt such anachronisms, but still it uses freely such Aristotelian terms as ὕλη, ὑποκεῖσθαι, διαθέσεις, παρὰ φύσιν. These are quite as inappropriate to Democritus, from whom he appears to have derived some of his Protagorean information, as to Protagoras himself. More specifically also, it should be

noted that strictly he neither derives the Protagorean doctrine of truth from the theory of perception he gives, nor connects the latter with the 'homœomeries' of Anaxagoras. Indeed his account would seem to indicate this difference between them, that whereas the 'homœomeries' were (like the atoms) discrete and unchangeable particles, Protagorean 'matter' was conceived as a continuous fluid.

Thirdly, Dr. Gomperz leaves his account of Plato's interpretation of Protagoras very incomplete. He does not attempt to explain, *e.g.*, how it is that Plato at first shows no cognisance of the Protagorean theory of knowledge, and even in the *Euthydemus* gets hold of a corollary from it without mentioning the main dictum, of which he seems to grasp the importance only in the *Theætetus*. Nor does his theory seem to explain all the peculiarities of the *Theætetus*, to which I have drawn attention.[1] It certainly enables him to defend Protagoras on the essential point that he could consistently both declare all opinions true and yet could declare some better than others, and vindicate the office of the rhetor. But it compels him to minimise the recognition of value-judgments in the Speech, though he cannot of course ignore this, like the tradition (p. 243, and *cf.* pp. 240, 267 *n.*, 276 *n.*). And though he sees that the Platonic 'refutation,' that Protagoras by admitting the truth of all opinions admits the truth also of those which declare the falsity of his own, is nugatory, because it implies Plato's conception of 'truth' and not Protagoras's, and that Protagoras could safely accept this 'Platonic' (or Democritean) poser as a further illustration of the fact that conflicting views always had some warrant in reality, he is still compelled in the end to regard Protagoreanism as vitiated by an 'enormous paradox,' and the psychological 'incongruity' that the same thinker had to be both a dialectician to declare all views true and a dogmatist to prefer his own. And so his rehabilitation of Protagoras is not complete.

Yet having gone so far in breaking with the orthodox tradition, there was no reason why Dr. Gomperz should not have gone

[1] *Plato or Protagoras?* and MIND, Nos. 68, 78. I may here mention that I have a little quarrel with Dr. Gomperz's account of some of my arguments on p. 263 f. I certainly did not imply that the Protagoras-Speech in the *Theætetus* was out of place, and that Plato was conscious of leaving it unrefuted. My contentions were that it was an echo of a Protagorean expostulation (perhaps by Theodorus), that Plato had to put it in 'by request,' and tried to refute it; that he thought he had succeeded, but succeeded only in showing that he had not understood it, all of which made it the better evidence for the real doctrine of Protagoras. I am aware that my hypothesis involves a somewhat complicated situation; but there is no difficulty in it for those who have shaken off the dogma of Plato's controversial infallibility. And Dr. Gomperz himself admits that Plato was wrong in thinking that he had refuted Protagoras both as regards the *περιτροπή* and as regards the law of contradiction (p. 229, 459 f.).

further. Plausible as is his affiliation of Protagoras to Anaxagoras, and consonant as it is with the assumption so dear to historians of philosophy that all philosophers were learned men who conscientiously perused all that their predecessors had written before venturing to think for themselves, it is well to remember that a simpler and more comprehensive solution of the Protagorean problem may be given, which presupposes nothing more difficult of belief than that Protagoras started his philosophy from his personal experience and used it to justify his life and profession. In other words he was a real, a radical, empiricist, who drew his theories direct from life at first hand. There are such people, and they are by no means fools, as even histories of philosophy are beginning to perceive.

At any rate there is no difficulty whatever in reconstructing Protagoras in this way. No one who had spent his life in teaching others how to argue cases, could well fail to observe that there was always something to be said on both sides, and that to say it well it was necessary to pay some attention to the structure of language, the logical concatenation of thoughts, and the persuasiveness of rhetoric. Nor could he fail to note that the most various views were in fact held to be true, and that social assent had quite as great powers in making them effectively 'true' as effectively 'just'. But neither could he allow, whether as an expert teacher or as a sensible and practical man, that all these conflicting views were in fact of equal value. That therefore he should have conceded 'truth' to all, while reserving the question of value, is reasonable, and would be highly probable, even if Plato had not attested it. What alone is astounding is that for over 2,000 years after the function of value-judgments had been discovered by Protagoras no other philosopher could perceive their importance. In this Plato, unfortunately, has not stood alone. But we have no right to allow our surprise at the facts to beguile us into a denial of their existence. The problem of values *is* raised in the Protagoras-Speech, even though the seed fell upon stony soil. And if it was raised by Protagoras, this was an infinitely greater achievement, than merely to have developed the metaphysics of Heraclitus or Anaxagoras. It is therefore only fair to give him the full credit for his achievement by treating it as the central culmination of his thought, especially as there are no real obstacles to so doing. Dr. Gomperz has no more serious objection to urge than to ask—"if value-judgments have in general merely individual validity, whence does the judgment about the unequal values of various judgments itself derive its claim [1] to more than individual validity?" (p. 269). The answer

[1] The question is badly formulated. As I have often shown, *no* judgment is 'valid' because of its formal claim to be true, and in all real thinking the vital issue is always—'is its claim *justified*, and how?' Dr. Gomperz should have asked, therefore, not—'whence is the *claim* derived?' but 'whence comes its *validity?*'

to the crux is ridiculously obvious and simple—*from experience.* Experience does in fact bear out the judgments, predictions and guesses of some far better than of others, and when it does, the latter usually follow their lead and take their advice. These facts are not surely so recondite and unintelligible that an intelligent Greek could not have noted them even 2,000 years ago. If then Protagoras was that *rarissima avis* in the cages of the philosophic schools, but a sufficiently frequent occurrence in the freedom of open-air life, a real empiricist, there is no reason whatever why he should not have held all the doctrines ascribed to him, combined into a system, the strength, consistency and elasticity of which was beyond the grasp of the pettifogging objections of philosophic dogmatisers.

F. C. S. Schiller.

The Evolution of Educational Theory. By Prof. John Adams, LL.D. Macmillan & Co., 1912. Pp. 410.

This volume is really a collection of essays whose central theme is educational theory. It begins with a discussion of the nature, scope and data of Education, deals later with the pre-historic stage, the social and individual aim, the educational organon, and specific education. From page 229 to the end the author treats of Humanism, Naturalism, the Idealistic basis of Education, the mechanical view, and the present educational outlook.

Every chapter contains much valuable exposition and suggestion, and the one-sided theories by which educational doctrine and practice have been affected in modern times are discussed with great shrewdness, saneness and ability.

The chief criticism that needs to be made of this book, is that its contents—good though they are—do not justify the title. As a systematic account of the evolution of educational theory it is undoubtedly disappointing. Evolution implies a process of development by differentiation and integration from germs, cells or other simple origins. The "germs" or living beginnings of educational theory are found in the writings of Plato and Aristotle, and any treatise which is to make good its claim to trace the evolution of educational doctrine must devote much more space than this volume does to the basic views of Plato as set forth in the Republic and the Laws, and to the teaching of Aristotle as set forth in the politics and elsewhere.

It is true that Prof. Adams to some extent disarms this criticism when on page 102 he thus refers to the aim of his book: "This book does not profess to be a history of educational theory, and makes no pretence of giving a chronological account of all the happenings that mark the process by which our present stage of educational

theory has been reached. It is enough if it indicates the great lines of progress and brings them into relation with each other."

With such an aim, carried out on the lines he has adopted, he should have chosen a different title.

Further, educational development—even on its theoretical side—is so closely connected with social and political development, that it is doubtful whether a really clear view of the evolution of either educational theory or practice is possible without a fuller statement than is here given of the great social and political influences which have been at work influencing and decisively affecting the various stages of that evolution.

Few, if any, of the problems which are being discussed to-day, or have been discussed by leading thinkers since the Renaissance, have not been started or dealt with by Plato and Aristotle. Psychology in its bearing upon education, the importance of physical training, eugenics, the ladder of education, liberal education *v.* vocational training, formal discipline—for these and many other modern questions we have to go back to Plato for a broad and fertile statement of principle.

The Platonic doctrine "one man, one work—each man the work for which he is best suited—and each man trained for thorough efficiency in his own work" is the "germ" from which has developed the theory upon which are built the present national systems of education in Scotland and Germany. It is interesting to note that Prof. Adams himself in the closing pages of his last chapter on the Educational Outlook unconsciously restates the doctrine and finds in it our hope in a democratic future. "By a system of early selection [p. 399] of the most promising educands, and by providing them with a suitable social as well as intellectual education, it may be possible for the State to get the best service from its citizens, while every individual born into the State may have his chance of full realisation."

Again (p. 400), "All will have an education suitable to the state to which their inclinations and capacities have called them. . . ." "Relief will no doubt be found in the introduction of division of labour. . . ." "The line of cleavage will not be caused by wealth or social distinction, but by capacity and inclination."

A remark which Prof. Adams makes on page 217 must be corrected here because it is misleading: "On Plato's scheme, after all [he says] the different classes of the community were being trained to fill the particular parts to which their *birth* entitled them". In the *Myth of the Metals* it is definitely insisted "first and above all" that children of inferior parts born to "golden" parents are to receive only "the value that belongs to their nature" and are to be thrust down among the lower workers, and children of good parts born of humble parents are to be raised to higher positions according to their ability. This was to show that all the citizens were to be

"set to the work for which nature has respectively qualified them".

Regarding the much-vexed question of Formal Discipline, Prof. Adams is somewhat inconsistent in his statements when dealing with the period at which it began to be discussed. On page 207, he writes: "By the very nature of the case the doctrine [of Formal Discipline] does not appear till late in the evolution of educational theory". Ten pages later he asserts, on the other hand, "wherever there is an organised system of education the theory flourishes and it can be traced at least as far back as the Greek States. It is set forth in its broadest form in the phrase 'Gymnastic for the body, music for the soul'. Certain subjects have to be studied not only for their own sake but also for the sake of their effect upon the soul. 'As experience proves,' says Socrates, 'any one who has studied Geometry is infinitely quicker of apprehension than one who has not.'"

Prof. Adams has but little faith in the general dogma of Formal Training and seems to agree with the "expert opinion" that as "an educational force it must be regarded as moribund". "It cannot be denied [p. 222] that within certain narrow limits, determined by the distribution of common elements, there is transference of power from the study of one subject to the study of another. But the transference is so small as to make it practically negligible for educational purposes." Recent experimental research seems, however, to support the claim of Formal Training, and the educational authorities of all civilised nations do not seem disposed to part with their belief in its value. It is not so long since a distinguished statesman asserted that a man who had gone through the training of a mathematical wrangler in Cambridge would make a better lawyer in six months, than another who had spent all his life at a law desk. Our Civil Service Commissioners give their appointments to men who distinguish themselves in Classics and Mathematics, and do not seem in a hurry to select only those who have studied Indian Law and cognate subjects from their youth upwards. Prof. Adams's own final estimate of the amount of real truth underlying the doctrine of Formal Discipline will be seen to be merely a modification of the teaching of Plato upon the subject. "While the general doctrine of Formal Training is almost universally rejected, there remains a wide belief that there is something in experience that gives colour to the popular notions of the subject. This something may in the last resort be reduced to the power the educator has of building up *general concepts of method* in the minds of his pupils." According to Plato the Sciences are instruments for turning the eye of the soul to the light that it may be able to see and understand general principles which are steps to the great reality, and aids to the highest efficiency.

The studies which are "of universal application" and seem "by their nature to lead to reflexion" still hold their place with those

in authority, as they did with Plato, not merely as most valuable tests for able minds, but as means of training these minds for the highest responsibilities.

The chapter on Specific Education is not the least interesting in this book, and the author's discussion leads us again to wish that he had gone back to Plato for the broad and sure basis upon which to build up his thesis. In the whole chapter he hovers round the various aspects of the subject as Plato presented them in the Republic, and, in spite of the ability which he shows in dealing with them in their modern form, he leaves us with the impression that the evolution of educational theory has not yet reached a stage when the gulf between vocational and cultural education has been finally bridged over.

In the Laws, Plato seems at one time to be an out-and-out defender of vocational training. "He who would be good at anything must practice that thing from his youth upwards both in spirit and earnest, in the particular manner which the work requires. . . . The teacher should endeavour to direct the children's inclinations and pleasures by the help of amusements to their final aim in life." The whole passage in the first book would satisfy the most practical and vocational of American writers. But according to Plato all this vocational training is not real education at all. For "education is that particular training in respect of pleasure and pain, which leads you always to hate what you ought to hate, and love what you ought to love from the beginning to the end," and is again described as "that which makes a man eagerly pursue the ideal perfection of citizenship, and teaches him how to rule and how to obey".

Modern theory must show, and modern practice must prove, that these two aspects of education are not mutually exclusive. On the bulk of the people has now been laid in democratic states the burden and responsibility of ruling, and on them also rests the duty of obeying. The same people have to acquire the skill necessary to perform efficiently the practical and lucrative labours of an economic society.

The training for a vocation and the training or education for citizenship must in some way be combined. Plato suggested a solution of the problem, modern theory and practice must apply the solution to modern circumstances.

Throughout the book and particularly in his chapter on The Educational Organon, Prof. Adams is too much disposed to pass lightly over the other instruments of education, and to lay supreme emphasis upon knowledge as the one great Organon. He does indeed, on page 16, as elsewhere, admit that "education has for its aim to modify the nature of the educand, and not merely to supply a certain amount of knowledge," and in chapter iv. the influence of

Imitation is discussed where the author is dealing with the prehistoric stage. But he has certainly not followed Thring's advice and "smashed the knowledge idol". On page 39 his words are, "The means by which the development of the educand is to be modified are twofold, (*a*) the direct application of the educator's personality to the personality of the educand, and (*b*) the use of knowledge in its various forms. We shall find as we go on that the *communication of knowledge tends to play the predominant part.*"

Mr. Holman's definition is quoted (p. 186): "Education is the science of human development, in so far as that development is *purposely determined by the systematic imparting of knowledge,*" and the general trend of our author's writing is on the lines of this definition.

Prof. Adams therefore does not leave much room for those influences which Plato summed up under "Music and Gymnastic," and which were the chief organa of his scheme of early education. "Music was only the counterpart of Gymnastic," and did not aim at the communication of knowledge "for it trained our guardians by the influence of habit, and imparted to them not knowledge but a kind of harmoniousness by means of harmony, and a kind of measuredness by means of measure".

Educational theory in its evolution has not entirely abandoned the influences that make for right feeling and right conduct—for love of the beautiful and love of the good. Music, art, religion—a suitable social and ethical environment "where our young, dwelling as it were in a healthful region, may drink in good from every quarter, whence any emanation from noble works may strike upon their eye or ear, like a breeze wafting health from salubrious lands" —the tone and discipline of the playing field, of school and of college—all these share with knowledge the honour of being fully recognised as necessary and important organa of a good modern education.

JOHN EDGAR.

English Philosophers and Schools of Philosophy. By JAMES SETH, M.A., Professor of Moral Philosophy in the University of Edinburgh. London: J. M. Dent & Sons. Pp. xi, 372.

IN the present work Prof. Seth seeks to give an account of 'English Philosophers and Schools of Philosophy,' as one of 'the channels of English literature,' which form the subject of the series to which it belongs. His aim, he tells us, has been 'to trace the chief stages in the development of English philosophy, through a study of its leading representatives in their relations to one another and to the general movement of English philosophical thought'.

Disclaiming any attempt at an exhaustive treatment of the subject, and assigning to criticism a subordinate place, he has sought 'to concentrate attention on the epoch-making philosophers rather than on the less important figures in the movement, and on the actual thought of the individual philosophers rather than on the logical sequence of English philosophy as a chapter in the history of ideas. Moreover, in accordance with the plan of the series, as well as in accordance with the facts of the case, English philosophy has been regarded as a form of English literature. At the same time the term "philosophy" has been interpreted in a strict sense, which excludes such writers as Carlyle or Matthew Arnold from the study here undertaken.' In the execution of this purpose the thinkers selected for treatment are passed successively under review, their main positions being set forth in untechnical language and to a large extent in their own words. Beginning in the introduction with a short sketch of Roger Bacon and William of Ockham, on the ground that their thought represents 'the characteristic trend of later English philosophy,' the work deals in its three main divisions with the philosophers of the seventeenth, eighteenth and nineteenth centuries, and concludes with a short chapter on the present tendencies in English philosophy.

In the selection of writers within this wide range and in the comparative amount of space assigned to each, good judgment has been shown. While the few great names have the prominence they deserve, the contributions of the smaller men are by no means ignored. Of actual omissions, perhaps the most striking is the absence of any account of the work of Samuel Clarke, although some pages are devoted to the ethical theory of Price, whose indebtedness to him is acknowledged. As is to be expected, it is chiefly with reference to the later portion of the book that differences of opinion may exist as to the author's method of presentation and implied sense of proportion. Thus, notwithstanding the strict interpretation of 'Philosophy' which has been adopted, as much space is assigned in the chapter on 'the idealistic answer to Hume,' to Coleridge and J. H. Newman as to Green and Bradley. The literary importance of the former pair of writers might perhaps be urged as a justification for a fuller treatment than their philosophical merits would require; but the view that the philosophical scepticism of Newman constitutes in any sense an answer to Hume is clearly open to challenge.

Prof. Seth's presentation of the views of the different philosophers is invariably fair and sympathetic. There are, however, occasionally points on which I cannot follow him. Thus, whether consistently with his other positions he ought to have done so or not, Locke certainly did not maintain that our general knowledge is 'unreal' (p. 6), or 'without real signification' (p. 152). On the contrary he prided himself on having shown wherein the reality as well as the certainty of such knowledge consisted. In the exposi-

tion of Berkeley's philosophy one misses a sufficient recognition of the more positive and constructive features of his theory of physical reality, which distinguish his position, even in the form in which it is presented in the *Principles*, from that of purely subjective idealism. Nor can I agree with the view that Hume had grasped the significance of Locke's distinction between trifling and instructive propositions, and in the *Inquiry* classed the mathematical sciences under the latter head. Like all other writers before Kant, except Locke, he there treats mathematical truths as analytical propositions, the denial of which would involve a contradiction. To turn to a point in Ethics, one would question the designation of Butler's conscience as 'a purely rational principle,' to the entire exclusion of the 'æsthetic and emotional element' which was so prominent in the 'moral sense' of Shaftesbury and Hutcheson. When it is said that Hartley's view of the principle of association 'practically anticipates the view of present psychology, reducing association to the single principle of contiguity,' the mental atomism of Hartley's theory, which modern psychology so emphatically rejects, is of course ignored. The reader, however, is not unlikely to be perplexed when he is subsequently told that 'Bain's definite differentiation of similarity from contiguity, as an independent and equally important principle of association, adds materially to the value of association as a psychological principle' (p. 279). He will at least be set wondering concerning the relation of Bain to 'present psychology'

I have indicated some of the points on which Prof. Seth's views seem to me to be open to criticism. Such things, however, must not be allowed to obscure the main fact, *viz.*, that he has carried through a difficult undertaking with excellent judgment, and has given us the most comprehensive sketch of English philosophical thought that has yet been written.

JAMES GIBSON.

Mysticism. EVELYN UNDERHILL. Methuen & Co., Ltd. 1911. Pp. xv, 600.

As I shall have occasion in the following paragraphs to speak freely of my admiration for Miss Underhill's most illuminating and beautiful work, I may, perhaps, be allowed to begin what I have to say by a few lines of criticism directed against certain minor imperfections. In the first place, the book is not entirely free from misprints. Most of them are trivial enough, but no decent Latinist should have permitted a famous work of St. Bonaventura to be quoted with the unintelligible title, *de Itinerario Mente in Deo* (p. 145). A number of small things of this kind raise a certain doubt how far the writer has first-hand knowledge of the numerous Greek and Latin works which are drawn upon. It is a graver sign of

inaccuracy where Greek and Latin are concerned that, though Miss Underhill has drunk deep of the well of Plotinus, she tells us, in the historical *Appendix* that that great philosopher and mystic was a "determined opponent" of Christianity, and "that he has left it on record that he attained three times in his life to ecstatic union with the 'One'" (p. 544). There are at least three mistakes in this brief passage. So far from being a determined opponent of Christianity, Plotinus never makes any certain reference to the existence of the new religion. He wrote a special tractate against the Gnostic Heretics "who call the Universe evil," but of orthodox Christianity he has nothing whatever to say. This may, of course, be explained as enmity showing itself by intentional silence, but it may also be due to the detachment of a spirit which cares little for forms and names and ceremonies, so long as the "one thing needful" is not neglected. We must remember that, as Porphyry expressly tells us, Plotinus also showed pure indifference to the active revival of Pagan worship which carried some of his friends off their feet. Next, Plotinus has left nothing on record of his personal ecstasies, or, indeed, of his personal life. Our authority for the statement which Miss Underhill gives in an incorrect form is Porphyry, and what Porphyry says is that the "experience of union with the God who is over all happened to him *some four times while I associated with him*". Porphyry adds that the same experience of "union" had occurred to himself *once* in the 68th year of his age. This remark is destructive of another observation of the author's. She remarks that the Neo-Platonic "philosophy" must not be confused with the personal mysticism of its founder, but unhappily adds, in illustration, that Porphyry inherited the philosophy but not the mysticism of his master. I can only suppose that the error is due to some vague recollection of the sceptical doubts expressed in the famous letter of Porphyry to Anebo. But these doubts are all concerned not with mysticism but with magic, and few writers have dwelt more to the purpose on the difference between the two things than Miss Underhill herself.

In the *Bibliography* I note also some omissions to which I may refer very briefly, and one or two unwise inclusions. Thus the exceedingly bad translation of St. Bernard *de Consideratione* by G. Lewis ought hardly to have been mentioned without a word of caution. Under the heading *Boehme* when the book reaches a second edition, it should be noted that Law's version of the *Signatúrae Rerum* and one or two other works may now be had as a volume of the *Everyman* series. Clement of Alexandria is not a "Saint," as I am sure the author, who perhaps did not herself draw up the *Bibliography*, knows. Under *St. Francis of Assisi* mention should be made of the great complete edition of the works of Francis now in course of publication by the Franciscan order. In Pascal's *Pensées* the reference should have been to the great and definitive edition of Mr. Léon Brunschvieg in the *Grands Ecrivains*

Français or to the *editio minor* of the same text published by Hachette. Richter's text of Philo is a useful one, but there is a later edited by Wendland and Cohn. Plotinus cannot be adequately studied in the corrupt text of Creuzer; the reference should have been made to the edition either of Volkmann or of H. F. Mueller. I think it should also have been noted that there is no decent critical text of Proclus "on the Theology of Plato," and that the text of the commentaries on many of the Platonic dialogues is to be had in an excellent form in the Teubner series. Perhaps also if Proclus is to be included, that curious repository of ancient cosmogony and "mystical" theology, the ἀπορίαι καὶ λύσεις of Damascius, should not have been omitted, especially as there happens to be a good modern edition of the text. Among the translations of the *Imitatio* into English, the beautiful earliest version of Bks. I.-III., edited for the Early English Text Society by Dr. Ingram, ought to have had the first place. (It is now accessible to the general reader in a slightly modernised form, along with the Duchess of Richmond's version of Bk. IV. in the *Everyman* series.) The third part of the *Bibliography*, which deals with Philosophy, Psychology, and Theology, is open to criticism as unduly filled with the names of small and unimportant books of no real service to the student, and, in some cases, quite unconnected with the subject of the volume. The reference to Plato should not have been to the now antiquated text of Stallbaum, nor should Professor Royce have been included among authorities without any hint that his philosophy is avowedly and definitely *hostile* to Mysticism. I do not understand why Dr. Schiller's essay on *Plato or Protagoras* should be regarded as having any connexion with mysticism, nor would it have occurred to me to mention Dr. Ward's great book, *Naturalism and Agnosticism*, in *this* particular context. A reference to his well-known *Encyclopædia Britannica* article on *Psychology* would have been much more to the point. In the section dealing with Magic it is a pity that most of the entries should refer to very modern works; references to some of the earlier treatises written when the tradition of Black Magic was still a living thing—*e.g.* the *Malleus Maleficarum*, or More and Glanvil's *Sadducismus Triumphatus*—would probably be found more useful.

So much then for small defects which I only enumerate because I anticipate a demand for a second edition of the book from which they could easily be purged away. To come to the main substance of the work, for which I, for one, have little but praise. In the first place, I would strongly commend the power and, in many places, the striking beauty of Miss Underhill's style. If her study of the mystical life misses a large audience, it will assuredly not be due to any defect of literary skill or want of delicate literary tact. I would also express my admiration of the psychological analyses of the various stages of the "mystical way" as described in the confessions and instructions of the great mystic. When one considers

the vast amount of material that has to be examined, the great individual variations due to differences of temperament between one mystic and another, and the fact that few of the great mystics have also been skilled observers of their own experiences, one cannot but feel that Miss Underhill's attempt to identify and rubricate the leading types of mystical experience, however much it may owe to earlier works on the same subject (to which generous acknowledgment is made), is a remarkable achievement. Similarly, I would add, she has laid the philosophical student of these particular forms of experience under a great obligation by her careful treatment of some particularly baffling questions. I may mention particularly the chapter on Mysticism and Symbolism, which goes far to lift the darkness from the writings of Boehme, that on Mysticism and Magic, and the chapter, invaluable to readers of St. John of the Cross, on the "dark night". I am not sure that something does not remain to be said on some of these topics, particularly on the second, but, at any rate, Miss Underhill has laid solid foundations for any future successor.

The work is divided into two main parts, of which the first, entitled *The Mystic Fact*, aims principally at giving the reader his orientation. An attempt is made to define the kind of experience to be understood as characteristically mystic, to discriminate it from allied experiences to be found in the lives of the great thinkers and artists, and to formulate a theory of the relations between mysticism and philosophy and science, on the one side, and such pseudo-sciences or half-sciences as magic and alchemy on the other. The second part deals, under the head of *The Mystic Way*, with the processes by which the great mystics of history have actually sought to find their goal, and the worth of the goal when found. Of the two parts, the second will, I think, be found the more valuable, as well as the more interesting. The great defect of the first part is to my own mind, that the writer has fallen a victim to the *dernier cri* in philosophical fasbions. The peculiar doctrines of M. Bergson are assumed without discussion as *the* last word of philosophy, and all earlier or divergent philosophical tendencies are judged exclusively from the Bergsonian point of view. This leads necessarily to an exaggerated contempt for the intellectual side of life which at times finds expression in an attempt to set Science and Philosophy, as mere attempts to '*know* Reality,' in sharp opposition to mysticism as the attempt to '*be* real,' and in almost contemptuous language about the poor "surface-intelligence" which is doomed to end in contradictions because it is itself so unreal. From the repeated asseverations of Part II. that the attainment of the mystic provides complete satisfaction for the intelligence as well as for the will and emotions, I should suppose that this Bergsonian point of view is something extraneous to the writer's inmost mind which vanishes unremarked as soon as she ventures to be herself in her writing.

It is well to insist that the supreme business of life is to *be* and not merely to know or to do, but, in fairness to the philosophers, it should also be borne in mind that φιλοσοφία originally meant just this. It was a "way of life," a "re-making of the whole man" (to use Miss Underhill's own terminology), and the identification of it with a *mere* knowing is an extremely modern debasement of a noble word. Even the fundamental postulate that only in so far as we become ourselves real can we hope to know the real, comes from Plato, whom Miss Underhill—rightly enough on her premisses —classes with philosophers rather than with mystics. And one might fairly ask whether knowing is not also a mode of being? All that can be said of the mystic life as a great spiritual adventure can be said equally of the life of the genuine philosopher. He too, must *be*, as Prof. Varisco puts it, *ex veritate* if he would ever obtain the knowledge he seeks, as Plato is so careful to point out in the great VIth book of the *Republic*. And it need hardly be added that the perfect philosopher would need, in his quest for knowledge of "ultimates," to be intimately at home with the experiences of the mystic as well as with those of the statesman or poet. The real point of distinction seems to me to be indicated in more than one passage of Miss Underhill's own work. A man may be a great mystic and yet possess very little power of reflective analysis of his own mystical experiences, just as Socrates found that a man might be a good poet and yet quite unable to say *how* his poetry came to him. So a perfect philosopher, if there could be one, would have to be at once a mystic, a poet, a lover, and a man of affairs, —and something more as well. He would have to be more articulate than the Maries in answering the question "*quid vidistis in via?*" And, after all, there is nothing but an induction of simple enumeration against the possibility of such superior articulateness. To be sure, the philosopher could only be articulate and intelligible to those who are also in their measure "followers of the way," but that is the very reason why Plato long ago attacked the belief that "philosophy" can be got out of books. As to the alleged "superficial" character of the intellect, that seems to me a mere fashionable prejudice. The only reason for the doctrine which I have been able to discover is one given by Bergson, which has always struck me as downright silly. The intellect, says Bergson, is a tool fashioned by evolution; its function must therefore be to assist the process of bodily adaptation to our physical surroundings; therefore it can only deal with the corporeal. To argue thus is to forget that it has always been at least as important to mankind to understand one another, and to adapt themselves to one another, as it is to adapt themselves to their physical surroundings. And I would ask whether the understanding of another which comes through sympathy is not a mode of cognition, or, if it is, whether there is any sense in talking of such intimate understanding as the work of a "surface" mind? At least it is obvious that Bergson's

argument could be used with equal force to show that all conation and feeling belong to the despised "surface" mind. His reasoning proves too much or it proves nothing. It is true that the development of the mystic is a reorganisation, not only of intellectual categories, but of the "whole man," but then this is equally true of the building up of a life devoted to *any* definite purpose, however humble or however perverted. A man cannot, *e.g.*, devote himself to business or to sport without a resultant all-round development of his self which will, *e.g.*, lead to new standards of valuation. In fact, no psychologist would now admit that *any* reaction on stimulus can be anything but a reaction of the whole self. Had this been clearly recognised from the outset, the writer would, I think, have escaped an obvious criticism, to which, as it is, her position seems open. On the one hand, we frequently hear of the mystic's "way" as *the* path, and, I assume, the only path, towards that Good which is fullness of life; on the other, it is frankly conceded that it depends on "temperament" whether a man will be able to find that "way" at all, and what particular adventures will befall him if he does. Unless we are to suppose that Heaven has made a very particular election of those who are to be "saved" (and I do not think the author believes in this inscrutable favouritism), these two views of the value of the "mystical way" can scarcely be harmonised. Surely the attainment of the Good cannot be initially made impossible for most men by their lack of a peculiar "temperament". But if not, the mystical way can claim to be no more than *one* path among others all leading to the same goal, the reorganisation of the whole personality in such a way that it shall be real through and through. It is of some importance for philosophy to be sure which of Miss Underhill's enunciations on this point is correct. Personally, I should have thought that even on the admission that the saints' "way to reality" is the only one, it is pertinent to remember that all the saints have not been mystics, nor, I would add, all the mystics saints. And on this point I should, I think, part company with Miss Underhill when she tries to indicate the difference between the mystic and the magician. True to her Bergsonian metaphysics, she finds the difference in the alleged fact that the magician wants to *know* but the mystic to *be* the ineffable. I doubt if the distinction is truly taken. The sorcerer, so far as I can see, no less than the saint of the mystical type, is mainly concerned with *being* something; *eritis sicut Deus* is the hope of the one no less than of the other. Both are for growing into a life which shall be to that of every day what waking is to dreaming. So far both seem to have the aim which Miss Underhill takes as typical of the mystic. Again, as may be learned from the older literature of the centuries in which sorcery had not sunk to be, in the main, a mixture of child's-play and fraud, both have the same sort of disciplinary purgation to pass through, and both the same raptures of illumination, the same moments in which the soul seems

to find itself alone with an ultimate Presence which the veil of illusion covers from common waking sight. We know, again, from the confessions of many who seem to have firmly and honestly believed themselves sorcerers, that the sorcerer has his "dark-night" of the soul, in which as it is popularly put, his familiar ceases to visit him and his incantations are powerless. Where the parallel seems to break down, is that, according to tradition at least, the sorcerer's "dark night" never gives place to a final stage in which his contact with his supreme Reality is restored in abiding form, his "spirits" always leave him in despair sooner or later. Of course, if we believe that Good and not Evil is *the* supreme reality, this is just what we should expect. But it would suggest that it is not to the contrast between wanting to know and wanting to be, but rather to the contrast between the direction of the will towards Good and its direction towards Evil that we must look for the ground of our distinction. The sorcerer, I should say, wants to be one with the supremely real, and so far is a genuine mystic, but at the same time he wants to be evil too, to keep side by side with the new self he has built up the appetites and desires of the old self. Hence we hear of men resorting to magic sometimes as a means to sensual gratification, sometimes as a means to satisfy curiosity, most often, perhaps, from a lust for power, but never quite disinterestedly. For *quidquid petitur petitur sub specie boni*, and therefore disinterested pursuit of evil because it is evil seems impossible. Hence, for the sorcerer and his degenerate modern followers the devotees of the "New Thought," "Christian Science," and the like follies, there can be no real "dying into life," no final "naughting" of the empirical self. One gets a good example of what I mean in Blake, whom Miss Underhill hardly succeeds in fitting into her scheme. It would be easy enough to show that Blake's writings over and over again exhibit the characteristic "notes" of mysticism as enumerated by the author. Yet, on the other hand, unless you allow that Blake frequently falls into the error of trying to affirm just some of the most perverse features of the empirical self, you are put to singular shifts to interpret many of his most fiery and eloquent deliverances, *e.g.* the *Visions of the Daughters of Albion*. It is just this want of single-mindedness in Blake's "mysticism" which seems to me to account for his complete self-surrender to the 'Visions' and other abnormal accompaniments of the mystic's life which, on Miss Underhill's own showing, have always been rather disliked and suspected by the greatest of "mystics". At the same time I must congratulate Miss Underhill on the general sobriety and sanity of her treatment of these constantly recurring accompaniments of the mystic life, which careless observation nearly always mistakes for its essentials. She does not often allow herself to forget St. John of the Cross's sound observation that "visions" and their like should never be dwelt upon or made much of, since

the chances are that they are not "sent from God" at all, and even if they are, they will accomplish their mission the better for not being brooded over.

Another matter in respect of which much may be learned from Miss Underhill is that "negative way" which figures so prominently in much mystical literature, and is so regularly misunderstood by unsympathetic psychologists and metaphysicians. Their almost universal misunderstanding lies in thinking of the "negative way" as solely or mainly an exercise in logic, a process of endlessly repeated abstraction, whereas it should rightly be conceived as primarily a way of growth in being, a reduction of the soul to its "ground," a purging away of the transitory and unworthy elements of the self, and thus a necessary stage,—in fact the very stage Plato has in view in his description of the first steps of the ascent from the Cave—in the remaking of a new and more real personality. On this, and on the kindred matter of the true meaning of "Passivity" in the mystic writers, all that Miss Underhill has to say is worthy of the most careful attention.

The second half of the work, which deals with the actual stages of the "mystic way" as recorded by those who have trodden it to the last, is a thing more to enjoy than to criticise. Criticism is largely excluded, as the writer herself says, by the very fact that we who would criticise are not usually ourselves far advanced on the "way". We have to deal with reports from those who dwell in a land of which we have at best caught distant, and usually vague, glimpses. Our whole procedure is thus empiricism of the most tentative kind. But one thing is quite clear. The remarkable agreement between reporters of the most diverse ages, lands, and traditional faiths, as to the general character of that far country, which is yet, as they all tell us, so near, and the main features of the road to it is enough to show that the mystics have a coherent vision no less than the artists and the statesmen, and that their type of experience must be taken into serious account by the philosopher in his attempt to understand and evaluate man's various attitudes to his world. One is no more entitled to dismiss mysticism as an aberration of degenerate individuals than to exclude art or business or political activity from one's philosophical purview on a like excuse. One may have doubts as to the mystic's claim that *his* "way" is the only path to full understanding of the world, as one has the same doubt about Abt Vogler's declaration that it is only "we musicians" who really "know". (I would remind Miss Underhill once more that the Church to whose authority she seems to pay most deference counts Martha as well as Mary among the "saints," and that it is not a "contemplative" whom it honours as the Prince of the Apostles.) We may doubt again whether, in in this life, the "unitive way" has ever absolutely reached its goal. Possibly the inability of the great mystics to tell us "what they have seen on the way," except in broken hints and by manifest

symbols, may not be wholly due to the inadequacies of language and the dullness of our vision. Even among themselves, it may be, they could speak little otherwise, because even they have not seen the "Good" face to face. Or again we may feel a more serious practical doubt whether full concession of the claims Miss Underhill is disposed to make for mysticism as "the only way" would not be, in part, a dangerous concession to something like spiritual pride. It is at least as well, when we have followed her exposition to its eloquent end, to remind ourselves of the pregnant sentence of T. H. Green warning us against the conception of a spiritual aristocracy, "there is no other genuine 'enthusiasm of humanity' than one which has travelled the common highway of reason—the life of the good neighbour and honest citizen—and can never forget that it is still only on a further stage of the same journey". But whatever our final verdict on the place of mysticism in life may be, we can all at least enjoy, as we try to understand, the loveliness of the rhythms and the beauty of the images by which the great mystic souls strive to tell us what they have seen by the way.

A. E. Taylor.

VII.—NEW BOOKS.

Psychology of the Religious Life. By George M. Stratton. London: George Allen & Co., 1911. Pp. xii, 376.

In the department of the Psychology of Religion American writers have taken the lead, and have made a number of important contributions to the subject. It may suffice to mention the works of James, Stanley Hall, Starbuck, Coe, Pratt, and Ames. And now Prof. Stratton of California University, in this new volume of the Library of Philosophy, has given us a very interesting book on the *Psychology of the Religious Life.* The author is distinguished from some of his philosophical compatriots by the fact that he writes a simple, clear and attractive style, and does not affect a technical jargon: when he can express his meaning in plain English he does so. The good taste of the writer is conspicuous, and his work is marked by a total absence of the controversial spirit.

In his Preface Prof. Stratton points out that, though the "Questionnaire" method followed by some American writers yields useful results, it is nevertheless open to objections. "The persons most easily reached by such means are, for the most part, adherents of one and the same religion, they are of the Occident, and naturally show a preponderance of that type of character that is ready to grant to a stranger an access to the secret places of personality." It is also true that those whose testimony would be most worth having are often those who care least to record their intimate experiences on a schedule; and we may add that many who are reached in this way are people who confuse their experiences with their interpretations and inferences. Prof. Stratton's method is to draw materials from the working of the religious consciousness as it is revealed in the religious exercises, institutions and sacred books of different races, savage and civilised. To conduct an inquiry of this kind of course involves a wide and adequate knowledge of the history of religion, alike in its higher and lower forms. The author, however, has striven with success to equip himself properly for his task, and the book is very full on the historical side. Indeed, in the earlier part of the volume especially, one sometimes feels that the pages are rather overweighted with details of religious history, and the purely psychological treatment could with advantage have been made fuller. To hold the balance level between history and analysis is not, it may be granted, always easy, and there is a natural temptation to over-elaborate the historical side. But another, and perhaps the most important, feature in Prof. Stratton's method falls to be noted. He does not try to trace genetically the movement of the religious life, but regards it in a certain determinate aspect. He holds, no doubt truly, that a sense of opposition or conflict is a characteristic of the religious consciousness. "In the religious life there is an inherent struggle. . . . And yet men naturally see this struggle, not as wholly in themselves, but at least in part as without: the powers and parts of the world appear to be in mutual strife. There is, however,

in peoples and religions a differing sense of this discord" (p. 3). And we are told that "the sense that life and the world are tense with opposition is not confined to religion". Surveying religion then from this definite standpoint, Prof. Stratton lays the broad domains of savage and civilised religion under contribution to explain and illustrate the operation of the principle. Following the familiar distinction of feeling, volition, and thought, in the three chief divisions of his book, he treats respectively of (I.) Conflicts in regard to Feeling and Emotion; (II.) Conflicts in regard to Action; (III.) Conflicts in regard to Religious Thought. More briefly, in a concluding section, he deals with The Central Forces of Religion.

It is a pleasant duty to say that the author works out his theme in a very sympathetic and suggestive manner. But the method he has elected to follow is not free from difficulty. The principle of conflict is not the whole of the religious consciousness, nor is it of itself the constitutive principle of religion. Consequently it cannot be taken as the organising principle of development by reference to which the data drawn from the different stages of religion will be seen in their natural connexion and meaning. In the result we are made to look on the field of religious phenomena from a particular angle rather than from a comprehensive and satisfying point of view. One advantage of the genetic or developmental method appears in dealing with the facts of the lower and higher religions in their relation to one another. It helps to give meaning to the contrast. No appreciation of the phenomena of the primitive religious mind will be just, if we neglect the points of psychical difference between savage and civilised man, and the way in which the psychical powers have evolved. It seems to me that this has not been sufficiently kept in view in the present work. For instance, in chapters which treat of "Appreciation and Contempt of the Self" and "The World Accepted or Renounced," we have rather a suggestive juxtaposition of data from the higher and lower culture than a satisfying insight into their meaning and relationship. But while we record this impression, we note that in another respect the writer's conception of a psychologist's office is perfectly just: "The aim of a psychological study of religion is to explain, after the manner of science; but not to explain away nor to support".

It is now generally agreed that feeling, thought and will are serviceable distinctions of the psychical life, not clearly marked divisions, for no element exists in complete abstraction from the rest. A treatment of religious psychology under these heads will therefore be convenient rather than perfectly consistent. Some of the phenomena here taken as "conflicts of feeling" might equally well be regarded as "conflicts of thought". The world-renunciation of the Hindu, for example, is as much an intellectual as an emotional act. But the reader will find what Prof. Stratton has to say on the emotional oppositions of religion quite relevant, and he sometimes makes noteworthy observations. In connexion with religious appreciation and depreciation he remarks, that belief in eternal damnation "is in reality an inverted utterance of the feeling of individual worth". So too he points out how the contrast of breadth and narrowness of sympathy is reflected in the conception of the world hereafter. "Prayers for the dead, so congenial to Catholicism, are in keeping with its genius for large grouping, for overpassing immense diversities of blood-colour and social condition." This is ingenious, though of course it is not a full explanation. Of the feeling-conflicts in religion as a whole, we are told they have their grounds in human nature: "The religious life and its oppositions are but the appearance of conflicting tendencies which run through human character". This affinity of sacred and secular feeling is aptly illustrated when it is pointed out, that the American "revival"

has a distant analogue in the "campaign" with its machinery for arousing interest in the party programme. Speaking of feeling generally, Prof. Stratton remarks that it is as central in religion as knowledge and action. We should say it is more central than knowledge, and this is distinctly so in the lower stages of religious development. It is partly, though not entirely, the result of the method he has adopted, that the author's discussion of feeling gives an incomplete account of its function in religion. The purification of feeling with the growth of culture deserves greater emphasis; and nothing whatever is said on the distinction of the religious emotions and sentiments, and the interaction which takes place between them on the higher levels of spiritual development.

Passing over the second division of the work, which deals with the contrasts of activity and passivity, of ceremonial observances and the inner spirit, we come to the part which examines the oppositions of thought. Here are discussed such matters as the trust and jealousy of intellect in religion, the opposition of picture and thought, the tendency to multiplicity of gods and to unity, and the contrasts of God regarded as known and unknown, as at hand and afar off. It is impossible to give an outline of the contents of these chapters, but I venture to think many of the conclusions will commend themselves to the intelligent reader. In myth we are invited to contemplate the beginnings of religious thought. As thought develops there is a reaction against it on the part of emotional religion, which distrusts the sobriety and coldness of reason. On the other hand, thought elaborates religious doctrines, which are necessary to the propagation and transmission of religious teaching. But unfortunately "the religious body usually makes little provision for the growth of the truth in its possession, encouraging revolution or secession, rather than change by the peaceful amendment of its articles" (p. 218). Again we find thought raising objections to the imagery employed in religion, and directing attention to the contradictions which it involves. The writer sees, though he might have dwelt more upon it, that these contradictions are sharpest where older elements of religion survive unharmonised with later developments. Out of such conditions issues the attempt to escape from imagery, and even from religious conceptions altogether. Symbolism conserves what is of value in the image and the thought, not neglecting the latter while retaining the imaginative vividness of the former (p. 256). What Prof. Stratton has to say on polytheistic and monotheistic tendencies is correct, though it hardly calls for special remark. He might, however, have made more of the expansion and articulation of society in furnishing psychological motives. It is, I think, true that reverence, ethically conceived, is a decisive influence towards monotheism. And it would have been worth while noting that the intellectual element, where it prevails, as in India and Greece, rather tends towards some form of pantheistic unity than to monotheism.

Prof. Stratton calls attention (p. 215) to a distinction, which he considers of great importance, between belief in the existence of the divine object and belief in its value. What he seems to be driving at is the distinction between opinion, or an act of intellectual assent, and faith which expresses a spiritual conviction of value. But the present writer at all events would call in question the statement, that worship is possible which simply asserts the *value* but not the *existence* of the object. It does not seem possible to separate reality and value thus, and the act of faith always expresses a feeling-interest in and a demand for the reality of the object. Neither a belief in value apart from reality, nor in reality apart from value, would be religious.

The concluding section of the book, if the shortest, is not the least important, and one or two things call for notice. The author rightly says

that no single activity is the source of the idealising movement in religion; and it is also true that it is hard to frame any adequate definition of so complex a fact as religion. He suggests we might speak of it "as man's whole bearing towards what seems to him the Best and Greatest". This is like the well-known definition of poetry as "criticism of life," true so far as it goes, but not enough to include all that is characteristic. Some might define the moral consciousness in the same terms. Any useful definition of religion must contain a reference to the sense of need, of incompleteness and dependence, on the human side, and the attribute of power on the divine side. In the concluding chapter where he discusses Standards of Religion, Prof. Stratton reaches the boundary of the psychological field, and comes in sight of the problem of truth or validity. And if he does not seek to deal with the problem deliberately and in detail, he at least says enough to show us the direction in which his thoughts are moving. To our mind he wisely refuses to accept the theory that there is a single test of truth. He distinguishes four kinds of truth, viz., pragmatic or utilitarian truths, truths of intellectual consistency as in mathematics, value-truths, and truths of fact or represented reality. Religion is concerned with them all, and not least with truth of fact, for it "feels itself concerned with a larger world, not existent merely in idea, but potent and actual". So the religious consciousness supplements the given world by an ampler one, and that in a way that corresponds to the scientific postulate that the world implies a rational unity of things, and to the demands of the æsthetic and the moral consciousness that it should be seen as æsthetically satisfying and morally harmonious. Religion has an equal right with art and science to express its peculiar need, and an impartial world-view will take that need into account. In religion as elsewhere the discovery of natural causes does not decide the question of validity. And though it is no part of the psychologist's task to pronounce on the matter of ultimate truth, Prof. Stratton at least makes it clear he does not sympathise with those who deny the reality of the religious ideal. "The dim and broken image of perfection may well be formed in sympathy with a Perfection that is most real. . . . The truth may well be, that those definite causes which work lawfully, as science would describe, in our mental life and in external nature and by intercourse with other men, are themselves sanctioned by the Best, as the means by which its own outline shall gradually appear in the clouded minds of men" (p. 367).

The book seems to us a very candid and suggestive one, and its perusal should be stimulating and profitable to all who are interested in the subject.

G. Galloway.

Psychotherapy. By Hugo Münsterberg, M.D., Ph.D., Litt.D., LL.D., Professor of Psychology in Harvard University. London and Leipzig: T. Fisher Unwin. Pp. x, 401.

This is one of the most fascinating of the many books that have come from the pen of Prof. Münsterberg. In his preface he takes care to tell us that the book is one of a series in which he adapts the results of psychological reflection to the non-technical of various types of experience. The lawyer does not want the same class of facts as the doctor, and the layman has his own preferences. Hence the volumes on *Psychology and Crime*, *Psychology and the Teacher*, and *Psychology and Life*. The present is another on the same plane of non-technicality. In a relative sense, all the books are "popular," but this does not mean that

they are either platitudinous or inexact. On the contrary, they are carefully adapted to the needs of readers educated in other fields, but not necessarily acquainted with the technical methods of recent experimental psychology. The preface has many details that are personally interesting, as, for instance, Prof. Munsterberg's justification of his entering on medical questions: "I have been through five years of regular medical studies, three years in Leipzig and two years in Heidelberg; I have an M.D. degree from the University of Heidelberg. In my first year as docent in a German University twenty years ago, I gave throughout the winter semester before several hundred students a course in hypnotism and its medical application. It was probably the first University course on hypnotism given anywhere" (p. ix). To any one that reads this volume the information is hardly necessary, for the precision of the clinical details given in the practical part tells its own tale of familiarity with the methods of the consulting-room. But the information is none the less welcome in that it may persuade the medical men of this country to accept the strong pleading here adduced for the incorporation of hypnotism among the medical studies at the Schools. Whatever be the reasons, the fact remains that in this country the scientific use of pyschotherapy is in its infancy, and the medical schools have neither the men nor the wish to teach it. All the more do we welcome this English book by a German-American of such extended experience and such eminent skill not in science alone, but in the greater field of philosophic thought. Let me say, too, that the English is, for its purpose, English of the first quality. Indeed, the style is so crisp and precise that it makes difficult things almost too easy, and may land the reader in assent before he has time to dispute. The redeeming point is that the book will certainly be read a second and a third time, and then reflection may do its work.

The book contains three parts: Part I. on the psychological basis of psychotherapy, Part II. on the practical work of psychotherapy, Part III. on the place of psychotherapy. Part I. has chapters on the aim of psychology, mind and brain, psychology and medicine, suggestion and hypnotism, and the psychology of the sub-conscious. The relation of these to the practice of psychotherapy is not direct, but the scientific "orientation" they furnish is very necessary. "Psychotherapy is the practice of treating the sick by influencing the mental life" (p. 1). Its "chaotic character . . . results from the fact that in our period one great wave of civilisation is sinking and a new wave rising . . . the history of civilisation has shown at all times a wave-like alternation between realism and idealism, that is, between an interest in that which is and an interest in that which ought to be . . . the world dimly feels again that technical civilisation alone cannot make life more worth living. The aim of the last generation was to explain the world; the aim of the next generation will be to interpret the world; the one was seeking laws, the other will seek ideals" (p. 3). Here we are at once introduced to the dichotomy made so familiar to us in the *Eternal Values*—the dichotomy of cause and purpose, science and value. Whatever may be our view of this philosophic position, it affords an excellent standpoint for the critical and expository chapters of Part I. "The man whose inner life I want to share I treat as a subject, the man whose inner life I want to describe and explain, I treat as an object" (p. 13). "The causal view only is the view of Psychology; the purposive view lies outside of psychology" (p. 14). "Causal truth can be only the second word; the first word remains to purposive truth. From this point of view we may understand why there is no conflict between the most consistent causal explanation of mental life on the one side, and an idealistic view of life

on the other side ; yes, we can see that the fullest emphasis on a scientific psychology—which is necessarily realistic and, to a certain degree, materialistic—is fully embedded in an idealistic philosophy of life, and that without conflict" (p. 17). To establish the causal view of mental facts, we need to postulate psycho-physical parallelism. "Every psychical fact is to be thought of as an accompaniment of a physical process, and the necessary connexions of these physical processes determine, then, the connexions of the mental facts. Indeed, this has become the method of modern psychology" (p. 33). Otherwise, "it becomes entirely impossible to conceive necessary connexions in the sense of physical necessity in the world of consciousness" (p. 32). "Mental life is produced anew in every moment" (p. 32). This extreme statement needs discussing, but it is discussed in such a way that the positions can be fairly countered by any one concerned to counter them. Parallelism is "simply a postulate" (p. 40). This makes it possible to reduce the elements of mental processes to sensations, which are capable of objective description and, therefore, of scientific handling. "In short, the psychological association of ideas, which we should simply have to accept as inexplicable fact, is thus transformed into a connexion which we understand as necessary ; and the fact is really explained" (p. 43). Into the theory of "explanation" here implied it is not necessary to enter and the fact that we are asked to accept the "postulate" somewhat disarms any criticism in this context. More important is the view of attention, which is fundamental to the work of psychotherapy. "Yet even the highest development of the association theories did not seem to do justice to the whole richness of the inner life. . . . If there is anything essential for inner life, it is the attention which gives emphasis to certain states and neglects others. . . . This new development has come with the growing insight that the brain's mental functions are related not only to the sensory impressions, but at the same time to the motor expressions. . . . If a neutral fair account of the brain actions is attempted, there can hardly be a doubt that this whole sensorial view of the brain is only half of the story and that the motor half has exactly the same right to consideration . . . must understand that there cannot be any sensory process which does not go over into motor response" (p. 49). This view, though not so simply and directly put, was made familiar in Croom Robertson's original summary of Münsterberg's early positions many years ago. It looks curiously like a restatement of Bain's position, though the physiology is different from Bain's conjecture about the "out-going current". "Full vividness belongs only to those sensations for which the channels of motor discharge are open, while those are inhibited for which the channels of discharge are closed ; and any channel of discharge is closed if action is proceeding in the opposite channel" (p. 49). Here then we have the elements for a theory of attention and its mechanism. The theory is applied with happy effect to "suggestion". "A suggestion is, we might say at first, an idea which has a power in our mind to suppress the opposite idea. . . . Our life would be crowded with inner conflicts if education had not secured for us from the start preponderance for the suggestions of our educators" (p. 86). But how shall an "idea" suppress an opposite "idea"? "From a logical standpoint, ideas may contradict each other, but that refers to their meaning. As mere bits of psychological experience, I may have any ideas together in my consciousness . . . as mere mental stuff, the one idea does not interfere with the other. On the other hand, this is evident : I cannot will to turn to the right and to the left at the same time" (p. 89). "There is no action which has not its definite opposite. The carrying out of any impulse involves the suppression of the contrary impulse"

(p. 89). And physiology supports this view. "To attend means, therefore, to bring about a motor setting by which the object of attention finds open channels for discharge in action" (p. 99). Suggestion "shares with attention the power to re-enforce and to inhibit . . . it is meaningless to speak of suggesting an idea; we suggest either an action or, if no action is concerned, we suggest belief in an idea" (p. 100). "Yet what else is a belief than a preparation for action?" (p. 101). "To prepare ourselves for one line of action means to close beforehand the channels of discharge for the opposite" (p. 102). "Every suggestion is thus ultimately a suggestion of activity" (p. 104). Here are the elements for the complete correlation of attention, belief and suggestion, and the correlation is enforced with much wealth of simple illustration and argument. "Auto-suggestion" is not left without explanation on the same lines. "To be suggestible means thus to be provided with a psycho-physical apparatus in which new propositions for actions close easily the channels for antagonistic activity" (p. 106).

Hypnotism is then analysed in the same way. It is less akin to sleep than to attention (p. 113). "The fundamental principle of the hypnotic state lies in its selective character" (p. 115). Like attention it suppresses all irrelevant ideas. Superficially like sleep, it is fundamentally different; for sleep is characterised by a lessening of cerebral function, while the hypnotic state is characterised by the contrary, but with selection of idea. In fact, "we have there symptoms which rather characterise the state of over-attention than the state of sleep" (p. 115). The position is thus summed up: "Thus the increased suggestibility of the hypnotic state will result not from a partial sleeplike decrease of functioning, but the decrease of function is a motor inhibition which results from over-attention" (p. 116).

There are many pointed propositions in the argument, but it is enough to indicate the essentials. The chapter on the "subconscious" has also much that tempts one to argument. "The story of the subconscious mind can be told in three words: there is none" (p. 125). But, when we read to the end, we find that the difference between Prof. Münsterberg and Dr. Morton Prince, not to speak of Janet and Freud, is rather one of interpretation than of facts. It is important to discuss the subconscious in such a book if only to make the reader aware of the confusions that arise from a loose use of the word. But Münsterberg (p. 156) says: "in the light of such interpretation, it has been correctly proposed to speak of co-conscious processes, rather than subconscious". The facts usually subsumed under the term "subconscious" he prefers to explain by "physiological dispositions". This group of expressions is more fully discussed in a symposium on "Subconscious Phenomena" by Münsterberg, Prince, Janet, Ribot and others (Rebman).

Of the chapter on "Psychology and Medicine" it is necessary simply to say that is a clearly worded plea for the need of a thoroughly grounded "applied psychology," if psychotherapy is not to do more harm than good.

In Parts II. and III., these general principles are applied over the whole field of psychotherapy. Their value is abundantly shown in the many concrete cases described. The ethical as well as the scientific aspects are fully developed. The work of Freud and his school is cordially recognised. It would be difficult to exaggerate the value of the many wise directions the book contains. Of all the books I have scanned since I first read Braid and Heidenhain, I have seen none that offers to the educated physician or psychologist a better perspective of the whole field of psychotherapy in the sense of "applied psychology".

W. L. M.

Historical Studies in Philosophy. By Emile Boutroux. Authorised Translation by Fred Rothwell, B.A. London: Macmillan & Co., 1912. Pp. ix, 336.

M. Boutroux publishes these sketches unwillingly, in response to the solicitations of his friends. The results are only to be regarded as provisional; and the critical basis on which they rest is omitted. The writer protests against the idea that any one, by a mere study of texts, can get at a philosopher's spirit, and hence at his doctrine; and holds that we are more likely to do it by reading the philosopher's works as a whole. Words are ambiguous, and inadequate; a particular passage always says both more and less than its author means; and we cannot correct this merely by placing the various passages over against one another and taking a sort of mean. Passages are not like "readings" in a scientific experiment. We can correct this inadequacy of words only by reading the various passages in the light of the whole.

Now if this means that the study of the texts, without any attempt to rethink the doctrines from the point of view of the philosopher, is a bad thing, no one will be likely to dispute the point. But if it means that those critics who have given most detailed study to the texts have also failed to realise the spirit of the thinker, and that this was to be expected; and if it means that we must avoid this detailed study and keep the philosopher as a whole before us, then the doctrine cannot pass without challenge. It may only mean that the study of the texts is apt to make us forget the spirit of the philosopher. But there is more in M. Boutroux's view than this. In an essay on "The Relation of Philosophy to the Sciences," we read: "A certain degree of reliance on the subjective method, *i.e.* on intuition, is the condition of objectivity, *i.e.* of attaining concrete knowledge". This M. Boutroux regards as true even in Mathematics; and it is still more the case in dealing with a philosopher, *i.e.* in dealing with material which is essentially the product of human thought. We thus see that M. Boutroux desires freer play to be given to the critic's own "intelligence, his sensibility, his taste," in the interpretation of a philosophy. In his strictures on the textual method he perhaps has in view the kind of work done by M. Couturat on Leibnitz and on Kant, in which we do seem to find the collection of texts pursued to an extreme point. But even M. Couturat could hardly be accused of having made no attempt to enter into the spirit of the philosopher he is studying. And it must be admitted that there is scope for the kind of destructive work attempted by M. Couturat in his study of Kant.

But perhaps M. Boutroux would not deny this. He may simply be asking that we should be granted the right of coming to a provisional conclusion on a philosopher when we have studied and restudied him as a whole and made a persistent effort to enter into his spirit—that we should not be barred at the outset because we have not collated the 147 passages in which this set of writers speak of εἶδος, or the 120 (in unpublished manuscripts) in which that philosopher speaks of the law of identity. And yet there may be grave danger in neglecting these things. It is at least possible that M. Couturat's Leibnitz and Prof. Taylor's Socrates should turn out to be the true ones. *E.g.* M. Boutroux bases his account of Socrates on the view that Xenophon is the only impugnable witness; now this may be true or it may not, but it must at least be settled by a careful examination of documents; and our estimate of Socrates may be profoundly altered as a result. The position is not so bad where we have a writer's actual works in bulk; but even there divergent views are possible, and textual work alone will enable us to decide finally. If we were to attempt to.

state what seem the defects of the ordinary philosophical criticism, it would be somewhat as follows. In the first place men are biassed by training. If we begin Plato in our undergraduate course, with a detailed study of the *Republic*, it is difficult to get away from the *Republic* in all our subsequent study of Plato. The text-books obsess us everywhere with catchwords—Leibnitz and Monadology, Descartes and the Cogito, Hume and Scepticism, Berkeley and Subjective Idealism, Socrates and Induction, Plato and Ideas, and so on; and it is difficult to read a philosopher without being influenced (and cramped) by these associations. In cases where texts are scanty, we have to make them go a long way, drawing freely on our imagination in the effort at reconstruction; and we tend to do the same thing where texts are plentiful, whenever we come across seeming contradictions. In the effort to get an interpretation accepted among men, we tend to slur over all difficulties. Two things are to be desired in a historian. First, that he should fight against the tendency to make a passage mean more than he can be certain it means—the minimum should be taken out of passages rather than the maximum. This can only be attained by our having the utmost sympathy with the writer. If a philosopher could come back and read the various commentaries on his works, I believe his most frequent remark would be, "I don't mean that: I *only* mean . . . "; and his worst complaint, that of lack of sympathy. Secondly, the historian should state with all the clearness of which he is capable, those parts of the doctrine which have caused him most difficulty, and those parts in which he feels most doubt as to his interpretation. We should then have a chance of co-operating with him. And perhaps something of all this is in M. Boutroux's mind. But his own method is attended with disadvantages. The sympathetic study of a philosopher's spirit—the endeavour to see things with his eyes—leads to a kind of dramatic monologue in the third person in which, for the sake of effect, we assume more infallibility than we mean to assume. M. Boutroux's work is full of this: we must recognise, however, that the defect is one of method and not of intention, and give full weight to his statement in the preface that the results are only to be taken as hypotheses, to be corrected again and again by a careful study of the text in detail.

The book contains five sketches: dealing with Socrates, Aristotle, Boehme, Descartes and Kant. The two useful ones on Aristotle and Kant seem to be due to a desire to correct the one-sided views caused by attending to a limited portion only of these philosophers' works; but the survey is extremely rapid and at times becomes a mere catalogue. In the biographical sketch of Kant (which reads extremely badly in translation) the facts are curiously mingled (pp. 256-265). The notes on Kant's influence in England, and on the fate of Kant in Italy and Spain, could usefully be omitted. The short study of Descartes is devoted to showing that there is a much closer connexion than is commonly imagined between Descartes' philosophy and the moral doctrines set forth, *e.g.* in the Letters to Princess Elisabeth and the Queen of Sweden. The essay on Boehme vindicates his right to be regarded as the "German Philosopher" This and the one on Socrates are the best in the book.

M. Boutroux bases his account of Socrates on that of Xenophon, who, however, is to be read with the eyes of Plato and Aristotle. The result of this investigation (which M. Boutroux does not of course claim to be new) is put in a clear and interesting manner. Socrates' work is a result of setting physical science and the art of the Sophists over against one another. Socrates never studied physical science deeply. He studied it just enough to condemn it, as dealing with objects which lay beyond the reach of human knowledge. But he found in it one very valuable thing, the idea of science. This is what was lacking in the art of the Sophists.

They dealt with the right kind of object, namely man, but not in the right way. We must found a science of man. But the old idea of science is inadequate to the new material; and this material itself is at present looked on in a wrong way. Our preliminary problem then must be, "Of what should science consist, in order that virtue and happiness may be objects of science?" (p. 31). The test of certainty with which Socrates starts is, that man should agree with himself and with other men. And the material of ethics lies in man's thoughts. This is providential, for we can only discover what is in man's thoughts by conversing with him, and this converse will also, if we use a right method, conduct us to agreement with others and with ourselves. The result will be, to tell us what we all mean when we use notions, *i.e.* to conduct us to the general. Thus the proper object of science is the general.

All the well-known characteristics of Socrates are then interpreted as having special reference to this object. They are all designed for the purpose of more successfully eliciting what is in men's minds, and of sifting the information thus derived. The method as a whole is applicable only to the moral sphere, and was not intended to apply anywhere else. If we are to accept Xenophon as our most trustworthy witness, this is about as good an account as could be desired.

Unfortunately the translation cannot be praised. There is a certain vivacity in the style, but the whole abounds in infelicitous phrases and barbarisms. *E.g.*, "the complaisant use of the method of analogy" (p. 47); "the principal mobile" (p. 68); "he contradictorily examines the yes and no regarding each subject" (p. 100); "the circulus of generation and destruction" (p. 119); "the Leibnizian virtualities" (p. 261); "The problem of the criticism of human knowledge was not long before it captivated him" (p. 261); "Kant stoutly explained his position in a treatise . . ." (p. 262); "We discuss about the beautiful" (p. 296).

The translator occasionally betrays a lack of knowledge of philosophical terms and ideas. This seems to account for the mistranslation on page 93, line 4 from the bottom: "The table of categories [Aristotle's] seems to have been drawn up by a comparison of *the* words with one another". On page 237 we read of "the Cartesian reduction to *extent* of all that is not spirit". On page 284 Kant is made to say: "It was only by abolishing *learning* that I could find room for belief". On page 289, line 18, "the concept of good will" should be "the concept of the good will". The translation of the σοφία by "science," explained in a note to the preface, leads to Socrates being represented as holding that "the virtues are sciences" (p. 54). On page 55, line 7, it seems as if "science" should be "virtue".

A few misprints occur. On page 161, line 2 from the bottom, "restores" should be "reduces". On page 320, line 7 from the bottom, "casual" should be "causal".

Mr. Rothwell would be advised either to cease translating or to exercise much more care in his choice of words.

LEONARD J. RUSSELL.

Archives of Neurology and Psychiatry from the Pathological Laboratory of the London County Asylums, Claybury, Essex. Vol. v. 1911. Edited by F. W. MOTT, M.D., F.R.S., F.R.C.P.

That the municipally supported institute for scientific research at Claybury (unique of its kind in this country, we believe) continues brilliantly to justify the wisdom of its founders and their choice of its director, is abundantly proved by this volume of papers. Besides a number of valu-

able papers on physiological and anatomical pathology, it contains several of great interest of a distinctly psychological character (especially papers by Drs. Ernest Jones, Bernard Hart, Harper-Smith, and G. F. Barham). Dr. Mott's important lectures on heredity in relation to insanity, which are reproduced here, are also of immediate interest to psychologists. Dr. Mott is to be warmly congratulated on the fact that he is bringing together a group of younger physicians, who, unlike too many of their older colleagues, are not content to approach the problems of insanity of mind from the side of pathological anatomy and chemistry only, but are joining in the modern movement (already abundantly justified) towards the psychological study, interpretation, and treatment, of mental disease.

W. McD.

Chapters from Modern Psychology. By James Rowland Angell. The Ichabod Spencer Lectures, 1911. London, 1912. Pp. 308. 6s.

A series of eight pleasantly written popular lectures on some of the principal branches of psychology. The book is well suited for introducing to the science the layman who wants to know "what it's all about".

W. McD.

Gehirn und Seele. Von Dr. Erich Becher. Professor im der Universität Münster. Heidelberg. 1911. Pp. 405. 5.40 marks.

This book comprises three sections. The first section presents in 160 pages a clear and concise description of the structure and functions of the nervous system, with some critical discussion of modern views on localisation and restitution of cerebral functions. It is of interest to note that, like most of his continental colleagues, the author has not yet grasped the notion of the synapse as the seat of resistance, modifiable by use, fatigue, drugs, etc., a notion which has of late years found very general acceptance and proved itself extremely useful in this country, and which has begun to make its way in America. The second section, which makes up nearly half the book, is occupied with the sympathetic presentation and critical examination of the principal attempts to explain the course of mental process in terms of neural mechanism. Much space is devoted to the examination of physiological hypotheses for the explanation of memory, association, and reproduction. The difficulties of the "canalisation" (Ausschleifung) hypothesis are very clearly displayed, especial stress being laid on the facts of recognition of spatial and temporal forms. The author rightly insists that in all such cases the sameness of the wholes, which is the ground of our recognition of likeness or identity, is the similarity of proportions of the parts to one another and to the whole. So long as these relations are preserved, the qualities and the absolute magnitudes of the parts of an object may vary within extremely wide limits without seriously increasing the difficulties of recognition: yet all such variations (involved, for example, in the transposition of a melody, the execution of it at different rates, in the seeing of an object at different distances, inverted, and so forth) involve very great differences in the groups of nerve elements whose stimulation leads to perception and recognition of the object. These are taken as relatively simple instances of "founded" acts or experiences: and the author argues that, since in these relatively simple instances the commonly accepted physiological hypothesis encounters these and many other seemingly in-

superable difficulties, there is no justification for assuming that it can ever prove adequate to the explanation of the more complex modes of activity. He then shows that many of his objections to the canalisation hypothesis hold good also of the "intracellular" hypothesis, the only alternative yet suggested; and he points out that V. Kries and Semon, the principal advocates of the latter view, have not even attempted to suggest how a material memory trace may be deposited in a nerve-cell, but have merely made some vague appeal to the numerical vastness of the multitude of atoms that may be contained in a single nerve-cell and have appealed to the supposed analogy of the germ-cell; for this is assumed on all mechanistic views of heredity to comprise, in the form of material dispositions in space, the potentialities or determinants of all the innate peculiarities of the adult being. But, as the author rightly points out, to invoke this analogy is to beg the question in dispute, is to justify mechanistic explanation in one sphere by assuming that it is applicable in another of which we are equally ignorant; a mode of reasoning which, though it is common enough, can seem satisfactory only to those whose minds are dogmatically closed to the possibility of explanations of other types. The outcome of this section may be summed up in the author's words—"the more difficult, complicated, and intrinsically improbable, the shape taken by the purely physiological, the at bottom physico-chemical, hypothesis of memory, the more ready should we be to ask, whether we are not on a wholly false track, and whether it were not better to attempt (in the proper sense of the words) a physiologic-psychologic hypothesis of memory" (p. 271).

The concluding section is a very brief critical review of the principal current hypotheses of the psycho-physical relation. The course of the discussion tends strongly in favour of "interactionism"; but the author claims to reconcile "interactionism" with "parallelism" by pointing out (p. 374) that (as the present writer has also remarked) if psycho-physical interaction takes place, then psycho-physical parallelism is also true in a certain very limited sense; because those psychical processes which influence the course of physical processes must in principle be capable of being appreciated by us as phenomena in the same indirect way as energy changes or physical influences (such as magnetic attraction) which do not directly affect our sense organs.

The whole book is very clearly written, and the discussions are conducted with admirable impartiality. It may be strongly recommended to those many physiologists and psychologists who too confidently assume that the course of mental process and of bodily behaviour can in principle be adequately explained in terms of physico-chemical constructions.

W. McD.

Das Erkenntnisproblem in Hegel's Philosophie. Die Erkenntniskritik als Metaphysik. By ADOLF PHALÉN. Upsala: E. Berling, 1912. Pp. 458.

Dr. Phalén continues the distinguished line of Scandinavian philosophers who have devoted special attention to Hegel. He is well equipped for the task he has undertaken. His knowledge both of the text of Hegel and of the principal commentators, German, English, and Scandinavian, is obviously very extensive. His contention in this book may be summed up in his own statement: "Hegel's Hauptproblem das erkenntnistheoretische ist" (p. 215); and again "Das Erkenntnisproblem bei Hegel . . . bedeutet nicht ein Verlassen des transzendental-philosophischen oder des kritischen Standpunktes Kants, sondern ist eine folgerichtige Entwicklung desselben" (p. 292).

The view thus expressed is very new, for few propositions have been more generally accepted about Hegel than that his object was to reach ontological conclusions. Has Dr. Phalén succeeded in establishing his position? It does not seem to me that he has done so. He has, no doubt, succeeded in showing that certain stages in Hegel's arguments cannot be held to correspond entirely to anything in the nature of the reality contemplated, and can only be made intelligible if we take into account the mind which contemplates the reality, and, in its contemplation, gradually passes from partial error to truth. This seems to me an important characteristic of Hegel's system, not sufficiently emphasised by himself, and ignored by many students of his philosophy, and Dr. Phalén has done valuable service in calling attention to it. But it does not prove his point. An argument which cannot be understood except in reference to a knowing subject may yet give information which is not epistemological but ontological. For example, we may reach ontological conclusions by means of a *reductio ad absurdum*, although a *reductio ad absurdum* involves the introduction of an hypothesis to which nothing corresponds in the nature of the reality. In the same way, Hegel's arguments, though they deal not only with the reality but with the source of our thought about it, may yet lead to conclusions absolutely true of the reality. And this, I believe, is what Hegel considered he had accomplished.

J. Ellis McTaggart.

Leitfaden der Experimentellen Psychopathologie. Vorlesungen gehalten an der Universität Leipzig, von Privatdozent Dr. Adalbert Gregor, Oberarzt der psychiatrisch-neurologischen Klinik, Leipzig. Berlin, 1910, 8vo. Pp. x, 222.

An apology is due from the reviewer for his long delay in bringing this capital book to the notice of readers of Mind. It consists of sixteen lectures on the application of experimental psychological methods in the study of mental pathology. In the introductory lecture Dr. Gregor emphasises the importance of psychology to the psychiatrist, and discusses the possibilities and limits of the use of experimental methods, and the bearing of their use upon problems of clinical treatment. He then treats successively of experiments on "time-sense," reactions, apprehension, association, memory, evidence, attention, voluntary movement, bodily expression of affective states, mental work, and tests of intelligence. His plan in each case is to explain first the nature and technique of the experiments on normal persons, then to discuss their applicability, and alterations that may be necessary when the patients are abnormal, and lastly to give a summary of results obtained by himself and other experimentalists. Dr. Gregor is well known for his work on cases of Korsakow's disease, and he draws upon it for the particularly interesting lectures on memory and on attention. The book is clearly and methodically written, but as published it suffers grievously from absence of an index and of titles to the chapters. The table of contents is the reader's only assistance, and it has no references to the pages of the text. The reader who is undaunted by these difficulties will be rewarded.

T. L.

Received also :—

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VIII.—PHILOSOPHICAL PERIODICALS.

Philosophical Review. Vol. xxi., No. 2. **F. J. E. Woodbridge.** 'Evolution.' [Argues that "evolution is history; that antecedents and causes should consequently be historically construed; that evolution is pluralistic, implying many histories but no single history of the world; that man writes the history only of his own world; that, however, since he discovers his world to be a history, he may have a science of history or evolution which is universal; and that this science indicates that evolution is progressive".] **E. B. McGilvary.** 'The Relation of Self-consciousness and Object in Sense-perception.' [The relational view of consciousness is compatible with the recognition that the same real object is in different consciousnesses. (1) A real object may be a many-in-one with the same logical right as any 'single field of experience'. Pending analysis of the conception of continuity, it is not necessary to conceive (with 'natural' realism) that continuity of perceived surface is unreal, when the real surface is discontinuous. (2) Impenetrability is not a universal characteristic of space-occupying things. (3) Consciousness has a limited eternity and ubiquity, but its ubiquity and eternity radiate from the here and now. Contemporaneity is not to be confused with simultaneity. (4) 'Consciousness of consciousness' is a misnomer for an actual fact. An object of attention need not be an object of consciousness; it may be consciousness itself.] **L. W. Flaccus.** 'Moral Experience.' [The phrase 'moral experience' is meant to save ethics from subjectivism and metaphysical occultism. It may be interpreted biologically, psychologically, or autoteleologically. But the biological interpretation makes mistaken use of the objective, and therefore fails to catch the full implications of the moral as opposed to the non-moral and the immoral; the psychological is a descriptive frittering away of the whole problem; the autoteleological is guilty either of excessive simplicity of reading (Kantian type) or of laxity of method and ambiguous definitions (types of pragmatism and personal idealism). The future lies with the two modern types of the autoteleological interpretation; but they must rigorously reform their methods, and must undertake a persistent and discriminating treatment of special ethical problems.] **E. G. Spaulding.** 'Proceedings of the American Philosophical Association; the Eleventh Annual Meeting, Harvard University, December, 27-29, 1911.' Reviews of Books. Notices of New Books. Summaries of Articles. Notes.

Psychological Review. Vol. xix., No. 2. **V. A. C. Henmon.** 'The Relation between Mode of Presentation and Retention.' [Review of the conflicting results of previous work; report of new experiments. So far as regards the immediate memory of adults, auditory is clearly superior to visual presentation for all materials (nouns, nonsense syllables, numbers), for various forms of imaginal type, and for one, two, or three presentations. Visual-auditory presentation is slightly inferior to auditory, and decidedly superior to visual; visual-auditory-motor presentation

is slightly inferior to auditory and visual-auditory, and superior to visual. The correlations of abilities with different forms of presentation are positive and very high.] **R. S. Woodworth.** 'Combining the Results of Several Tests: a Study in Statistical Method.' [Given results from several tests of the same individual, how can we combine them so as to measure the success of each individual in the tests as a whole? Various rough methods have been followed; what is needed is a method which shall preserve all the refinement of the original measurements. Such a method is familiar to statisticians; and the purpose of the writer is to expound it, and also to work out simplified formulas, which may be used for computing correlations when the method has been employed. Once the individualist's standing in any number of tests has been found, the additional labour of computing correlations is slight. The formulas offered are in part mathematically equivalent to those usually employed, in part (if these others are taken as norms) approximative only; it does not necessarily follow that the latter are less nearly correct.] **J. E. Boodin.** 'Knowing Selves.' [In trying to know the self, we are concerned with the finite self and its processes; and our method must be naturalistic. We know other selves neither by analogical inference nor by mystical appreciation, but as we know ourselves, through the situations upon which we react. In particular, (1) there is a state of bare awareness, simpler than any involving the I-me relation; that relation itself is, however, merely the relation of selective content and selected object; in it the *I* and the *me* constantly change places; both are functions of a system of tendencies which strives to realise itself and which may be called 'self' in an inclusive sense. (2) Self-identity does not need the hypothesis of substance; constancy and change are both given facts of experience; while attention flickers, the context of interest may be lifelong. (3) There are unities in experience, but absolute uniqueness is a dogma; sometimes the self is partial; and there are different grades of unity. (4) Activity and freedom do not mean novelty; they imply the realisation of an aim; and this is there or not there, whether the stream of tendencies or a transcendental knower is the agent. In like manner, our method leaves unimpaired, (5) the value and worth of conduct.] Discussion. **A. E. Davies.** 'Professor Titchener's Theory of Memory and Imagination.' **E. B. Titchener.** 'Memory and Imagination: a Restatement.' [Discussion of the treatment of elementary image, memory and imagination in Titchener's *Text-book*. Criticism and reply.]

American Journal of Psychology. Vol. xxiii., No. 3. **E. Jacobson.** 'Further Experiments on the Inhibition of Sensations.' [Experiments with simultaneous presentation of sounds and odours. In the first series, the strength of the odour was rather increased than lessened by the accompanying sound. Hence in a second series the observers were instructed to relax attention to the odour; still there was no marked inhibition. Thirdly, concentrated attention was given to the sound; now the odour was weakened. The attention, upon which inhibition depended, is largely a matter of representative and other processes associated to the sound; the author therefore refers sensory inhibition to the action of such 'adducent' processes.] **G. S. Hall.** 'Why Kant is Passing.' [Outline, with running commentary, of the *Critique of Pure Reason*, the *Critique of Practical Reason*, the *Religion within the Bonds of Pure Reason*, and the *Critique of Judgment*. The first of these works leaves Kant the most extreme of agnostics; the second give us his greatest insight, that will is larger and deeper than intellect; the third errs in making the moralist the judge and assayer of the products of the folk-soul: the

fourth shows us that the entire idealistic movement is only a propædeutic to religious psychology. The author then deals briefly with the relation to Kant of Fichte, Schelling and Hegel, and distinguishes the three stages in the post-Kantian movement; Kantian orthodoxy, the application of the historical or comparative method, and current geneticism. The task of the present day is to psycho-analyse the great system-makers, not on the Freudian basis of sex, but on that of religion, and thus to understand them; it is wholly wrong to force such cumbersome thought-machinery as that of the Kantian epistemology upon our academic youth.] **E. B. Titchener.** 'Prolegomena to a Study of Introspection.' [Shows, with copious illustration, that introspection is still regarded as the most important means of psychological knowledge; scientific introspection must, however, be sharply distinguished from that of moralising common sense or of reflective philosophy. Introspection implies self-consciousness only as all scientific observation implies it; and the employment of the method need not itself be conscious. While introspection presupposes the standpoint of descriptive psychology, it cannot furnish a psychological system; like other scientific methods, it simply offers materials which may be worked up into a system.] **C. E. Ferree.** 'Description of a Rotary Campimeter.' [An instrument which makes it possible to work on any retinal meridian with the same ease and precision as were attainable with the old form on the nasal and temporal meridians.] **F. M. Urban.** 'A Remark on the Legibility of Printed Types.' [Points out that certain French logarithmic tables are printed, in accordance with Babbage's suggestion, on yellowish paper; the results are good. Raises, in connexion with such tables, questions of optics (spacing and grouping of lines, type, etc.) and of immediate memory (number of figures carried at a glance); recommends the division of the right angle into 100 degrees.] **E. B. Titchener** and **W. S. Foster.** 'A List of the Writings of James Ward.' **W. T. Shepherd.** 'The Discrimination of Articulate Sounds by Cats.' [Experiments on unnamed kitten of seven months and named cat of about three years; the results are definitely positive; the younger animal formed an association in 250, the older in 490 trials.] Book Reviews. Book Notes.

Journal of Philosophy, Psychology and Scientific Methods. ix., 17. **F. C. Sharp.** 'The Introductory Course in Ethics.' [Advocates discussion.] **J. W. Hudson.** 'The Aim and Content of the First College Course in Ethics.' [Wants 'education for democracy,' and 'a study of American ideals'.] **J. H. Tufts.** 'The Use of Legal Material in Teaching Ethics.' [As bearing on the nominal fixity of rules, the leniency of formal judgments and the problem of ends and means.] **M. Eastman.** 'Mr. Schiller's Logic.' [All teachers of logic should read it—it will give them the same comfort as profanity would.] ix., 18. **H. R. Marshall.** 'The Causal Relation between Mind and Body.' [Argues that the causal concept proper, which is derived from the observation of motions, must be distinguished from the concept of efficiency, which is derived from their experience.] **J. E. Downey.** 'Literary Synesthesia.' [The poets do not experience true synesthesia, but enjoy analogies between the senses.] ix., 19. **B. H. Bode.** 'Consciousness and Its Object.' [A criticism of the realist doctrine (McGilvary) that things undergo no change in becoming known, from a pragmatist standpoint.] **M. H. Strong** and **H. L. Hollingworth.** 'The Influence of Form and Category on the Outcome of Judgment.' [The experimenters had to class twenty-five photographs of actresses in the order of their preference, dislike, intelligence and stupidity.] **L. E. Hicks.** 'Something More about Inversion: A Rejoinder.' [To Schmidt; *cf.* ix., 9.] ix., 20. **C. A. Strong.** 'The Nature of Con-

sciousness.—I.' [*V. infra.*] **J. Dewey.** 'In Response to Prof. McGilvary.' [On the 'ego-centric predicament,' 'organic releases,' etc.] ix., 21. **C. A. Strong.** 'The Nature of Consciousness.—II.' [*V. infra.*] **J. B. Pratt.** 'Prof. Perry's Proofs of Realism.' [A keen criticism, arguing that on the author's own showing none of them are conclusive.] **C. Ladd Franklin.** 'Explicit Primitives Again.' [A reply to Fite in ix., 6.] ix., 22. **C. A. Strong.** 'The Nature of Consciousness.—III.' [The argument of this clearly and carefully written series of papers is that 'feeling' and 'awareness' must be distinguished. 'Consciousness' as feeling is psychical existence and starts from the recognition of "images" as "a perfectly plain and unequivocal fact". They are other than their objects, their relation to their objects must be conceived as mediating them. ii. They stand for their objects as a photograph stands for a person. The fact that images are *later* than objects "Suggests if it does not actually prove" that the objects exist independently. But the existence of images is psychical originally, and it remains to account for their projection into the object. iii. The image prompts us to act as if the object were at a certain point. The image taken with its motor promptings explains what we perceive, and projection is "a rooted habit of seeing the object in the guise of the image yet where the image is not".] **M. W. Calkins.** 'Mr. Muscio's Criticism of Miss Calkins's Reply to the Realist.' [*Cf.* ix., 12; upholds a 'personal idealism,' but admits that she has so far argued only for 'a solipsistic type'.]

Revue de Philosophie. 1er Mai, 1912. **M. Gossard.** 'The Frontiers of Metaphysics and Science.' [That apart from Metaphysics the unification of the Sciences is hopeless.] **Dr. Monsaingeon.** 'The Physical Cure of Psychoneurosis.' **A. Dies.** 'Critical Review of the History of Ancient Philosophy.' [A bibliography of German and French Dictionaries of Philosophers, Greek especially.] **P. Le Guayder.** 'Positivist Moral Systems compared with the Thomist.' [Positivists first deny that moral science is normative, and then bring in a normative moral of their own, teaching that the sum of moral duty is conformity with social environment; and that acts which have no direct social bearing are neither moral nor immoral. The Thomist distinction of primary and secondary moral precepts is shown to be an adequate recognition of such variation of the moral law as goes with the varying conditions of human nature.] 1er Juillet, 1912. **A. Huc.** 'Nervous Pathology and Mysticism: the case of St. Teresa.' [Teresa eminently a sane woman.] **S. Belmond.** 'Scotist Univocism.' [Scotus writes: 'Being may be taken in its widest sense as extending to everything that is not nothing, to everything that does not involve a contradiction, whether logical being or real being. By this concept of being we know God vaguely only, as having one common concept with others.' In this widest sense he thinks being is predicated of God and creatures univocally.] **A. Dies.** 'Critical Review of the History of Ancient Philosophy.' [A wonderfully elaborate bibliography of Orphic Verses and Hippocrates.] **Dr. R. van der Elst.** 'Moral Invalids.' [How they are made, and who and what is responsible for the making of them.] **F. Chovet.** 'The Constituent Elements of our Sensations.' ['It is precisely because the qualities called secondary exist in my organ and in the object itself only under the form of movement that we are authorised to attribute to this object real extension under the very form in which we perceive it.'] 1er Août, 1912. **S. Belmond.** 'Univocal in the Scotist sense.' ['*Being* may signify being something, the contrary of nothing, *quid*; or it may signify being this or that, *quale*: in the first sense God and the creature *are*; in the second sense God and the creature are *different*, one from another; in the first sense being is *univocal*,

in the second it is *analogous*. Duns Scotus makes of this *univocal* an arm against agnosticism and anthropomorphism.'] **A. Huc.** 'Neurosis and Mysticism; the Case of St. Teresa.' [St. Teresa was a woman of extraordinarily strong will and sound judgment, neurotics are neither.] **E. Peillaube.** 'Theory of Emotions.' [Intellectualist and physiological theories, William James.]

Archiv f. d. Gesamte Psychologie. Bd. xxii., Heft 4. **I. Netto** und **M. Groos**, herausgegeben von **K. Groos**. 'Die Sinnesdaten im "Ring des Nibelungen"; optisches und akustisches Material.' [A study, qualitative and quantitative, of the words denoting visual and auditory qualities used by Wagner in the "Ring"; comparison with Goethe, Shakespeare, Spenser, Schiller and others. Wagner's imagination is strongly visual, and only moderately auditory; the factor of speech is in him much stronger than in Goethe and Schiller, that of non-articulate sounds much weaker; he operates very little with colours, but more often than any other author so far investigated with neutral visual qualities and with words denoting glow, glitter, lustre; words of this latter group are especially favoured by musical writers.] **E. Bischoff.** 'Untersuchungen über Übungsfähigkeit und Ermüdbarkeit bei "geistiger" und "körperlicher" Arbeit.' [A differential study of mental work (addition) and bodily work (dynamograph) in the case of twelve subjects (men: 11 attendants, 1 physician). The results permit the arrangement of these subjects in the order of liability to fatigue, bodily and mental, and capacity of practice, mental only. There is no correlation between bodily and mental fatigue; between mental fatigue and practice; between (mental) practice and bodily fatigue. The positive results are rather the establishment, under all three heads, of marked individual differences, and the exposition of a simple and reliable method for the measurement of the phenomena in question.] **A. Kronfeld.** 'Experimentelles zum Mechanismus der Auffassung.' ['Apprehension' is the process whereby we become conscious of a non-spatial objectified content, *e.g.*, of the meaning of a sentence; the 'non-spatial' marks it off from 'perception'. We find the specific function of apprehension characterised, though inadequately, by Kant (dynamic synthesis), Wundt (apperception), and the recent representatives of the psychology of act or function, Husserl, Stumpf, Messer, Erdmann. To ascertain its psychological nature, we must mark off, experimentally, whatever in its mechanism is purely associative. Tachistoscopic experiments with 'associative constellation' (foregone suggestion), made on normal and abnormal subjects, lead to the distinction of four types of apprehension: the normal, the manic, the psychopathic, the demented; all show, in varying manner and degree, that associative mechanisms can influence the mode and direction of objectification in the act of apprehension. A second important factor in the mechanism of apprehension is found in the properties and characters of the letter-forms and word-forms presented; form of combination and position within the complex of letters have their special efficacy; with sense-material we misread far more often than we overlook. Experiments with pictures confirm the results already outlined. The introspective reports are reserved for later publication.] **M. Hirschfeld.** 'Über die Lokalization der Sexualzentren.' [The cerebral centres of the sexual processes may perhaps be sought in the epiphysis, and more especially in the hypophysis; the secretory glandular cells and ducts, recently discovered in the latter structure, suggest that it is the storehouse and manufactory of the chemical toxic substance which underlies *libido*.] Literaturbericht..

ZEITSCHRIFT F. PSYCHOLOGIE. Bd. lx., Heft 3. **A. Höffler.** 'Gestalt und Beziehung; Gestalt und Anschauung.' [After a preliminary discussion of arguments against (Gelb, Marty) and for the 'form of combination' (Hööfler, 'Benussi, Schmied-Kowarzik), the writer proceeds (1) to his negative thesis, that the form of combination is not explicable in terms of relation. Manifolds, he maintains, are either formed or unformed. Form of combination never appears apart from relations; and the relations may, in whole or part, be taken up (at least subjectively) into the form. But the form is as objective as the relations and the absolute contents which 'ground' them, and cannot itself be reduced to either. The term *Gestaltqualität* is useful, not only as indicating the quale of form, but also as emphasising the immediacy of this quale in experience. (2) On the positive side, the writer proposes to use the term *Anschauung* for the (ideational) act of apprehension of form. To use it for the act of formation (*Gestaltungsakt* instead of *Gestalterfassungsakt*) would involve the subject in the controversy regarding the production (*Produzieren*) of ideas. This he desires to avoid; he believes however—to take a concrete case—that "melodies are not invented but discovered".] Literaturbericht. Gesellschaft für experimentelle Psychologie.

"SCIENTIA." RIVISTA DI SCIENZA. Vol. xii., No. xxiv., July, 1912. **H. Poincaré.** 'La Logique le l'Infini.' [In the previous discussions on the use of the infinite in mathematics in which Poincaré joined, each side kept on repeating the same arguments. There seems, in fact, a fundamental difference in mentality among mathematicians; some, whom Poincaré calls "Pragmatists," believe that the infinite is derived from the finite, and all verification and all definition is performed with a finite number of words; others, the "Cantorians," believe that there are objects and truths which cannot be defined or demonstrated in a finite number of words. The Cantorians are realists and believe that the truth of a proposition does not depend on its verification by us. It is not difficult to place Poincaré, on the grounds of some of his writings, among those whom he not wholly inappropriately calls "Pragmatists". But by his strange statement that the "Pragmatists," but not the "Cantorians," reject what Mr. Russell calls "vicious circle fallacies," Poincaré would apparently place Mr. Russell among the "Pragmatists".] **K. Bohlin.** 'Die veränderlichen Sterne.' [Recent observation, etc., of stars which are variable in luminous intensity.] **A. Findlay.** 'Osmostic Pressure and the Theory of Solutions.' **C. Emery.** 'Le piante formicarie.' [Discussion of the biological significance of the association of certain plants with ants.] **M. Grammont.** 'Fonétique istorique et fonétique expérimentale.' [The phonetic spelling is the author's.] Critical Note. **A. Kronfeld.** 'Les fondements de l'intuitivisme.' [On N. Losskij's *Die Grundlegung des Intuitivismus*, Halle, 1908.] Book Reviews. [Among others, long and sympathetic analyses of M. Winter's *La Méthode dans la Philosophie des Mathématiques* (Paris, 1911), and J. E. Miller's *The Psychology of Thinking* (New York, 1909).] General Reviews. **F. Henkel.** 'La lumière zodiacale.' **C. Acqua.** 'Le sang des plantes.' Review of Reviews. Chronicle. Vol. xii., No. xxv., September, 1912. **H. Poincaré.** 'L'espace et le temps.' [One of the reasons which have decided the author to return to the question of space and time is the revolution in our ideas on mechanics lately brought about by the principle of relativity (Lorentz). It might appear that the principle leads us to form a wholly new conception of space and time, and to show that geometry is not out of the reach of assaults of experience. However, we need not modify our conclusions: we have adopted a convention because it seemed convenient. At the present time certain physicists wish to

adopt a new convention because they think it more convenient. That is the whole state of the question, and anybody can legitimately keep to the old way of thinking so as not to disturb his old habits. A short notice of the work of Poincaré is put by the editors in a note at the beginning of the article.] **F. Enriques.** 'Il significato della critica dei principii nello sviluppo delle matematiche.' [Occupied with the philosophical problem of finding the value of the critique of the principles of mathematics, and the place belonging to this critique in the progress of science. The author finds, both with the notions of continuity and infinitesimals with the Greeks and up to the times of Newton and Leibniz, and with other parts of more modern mathematics, that progress—both extensive and intensive—is a function of the critique of principles; and that this critique is not a new phenomenon but an essential part of the elaboration of concepts which at every period prepares for or accompanies the progress of science or its more extended application. Philosophically speaking, the most interesting part of this article is on what the author calls "pragmatism" and "naturalism". The father of philosophical pragmatism which has resulted in an anti-scientific reaction is the pragmatism of the mathematical logicians who, armed with the critique of principles, maintain the arbitrary character of definitions and postulates against the "naturalistic" conception (based on naïve realism) which considers mathematical entities as existing outside us and as thus being objects of discovery. This "pragmatism" may gain the victory over "naturalism," but is, in turn, conquered by history.] **E. Millosevich.** 'Dalla torre di Babele al laboratorio di Groninga.' [A rather rhetorical article in which the history of astronomy is divided into four phases: The ancient and non-Hellenic astronomy was *empirical*; the Greeks made of astronomy a *geometrical* science; *dynamical* astronomy began with Newton; in the nineteenth century began a *physio-chemical* phase. At Groningen, for example, there is what may be called an astronomical laboratory.] **D. H. Scott.** 'The Evolution of Plants.' [A brief consideration of some modern ideas on the historical course of the evolution of plants.] **H. Piéron.** 'Le problème de l'orientation, envisagé chez les fourmis.' [A long and detailed paper of great psychological interest on both ancient and modern work on the problem of orientation with ants. The actual state of the problem is formulated, and the question as to what we can deduce on the subject of processes of orientation in general is investigated. It is with the ants that the main problem can be resolved most easily by approximate experiments.] **W. Ostwald.** 'Über Organisation und Organisatoren.' [The first of a series of articles. This part contains a general theory of organisation and organisators.] Book Reviews. [Among others, there is an interesting review by F. W. Henkel of E. T. Whittaker's *History of the Theories of Aether and Electricity*, London, 1910.] General Reviews. **W. Mecklenburg.** 'Les théories thermodynamiques modernes.' **R. Maunier.** 'Le nouveau code pénal de l'Egypte et la science positive du délit.' Review of Reviews. Chronicle.

IX.—NOTES.

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STIRLING'S RELATION TO HEGEL.

To those who were brought up by Stirling to regard the name of Hegel with a reverence accorded to no other, who from comparatively early years were familiarised with the Hegelian terms "Universal" and "Particular" through hearing them frequently in paternal exhortations, it seems incredible that any uncertainty should exist regarding the relation of the Scottish to the German philosopher. It appears, however, that a passage in the Note on Hegel in Stirling's translation of Schwegler's *History of Philosophy* has given rise to some misunderstanding, and it has been thought advisable to endeavour to remove this misunderstanding by stating briefly what are known to be the actual facts of the case.

Perhaps the best way to come to an understanding of the nature of Stirling's relation to Hegel is to realise the meaning of an expression to be found everywhere in the former's works—the "Historic Pabulum". This expression is Stirling's own, and may be said to sum up the lesson of his life—a life for more than fifty years, of almost unparalleled concentration on a single study, a single object—the study of the philosophy of Hegel and his immediate predecessors (together, it must be added, with that of Aristotle), and the resolve to develop this philosophy, and to advance, as far as possible, the knowledge of it. By "Historic Pabulum" Stirling means the outcome of the labours of Man as thinker —the form in which thought has emerged in one's own day after a world-long passage through the highest minds of all ages. He was never weary of urging the importance of "assimilating the Historic Pabulum," never tired of proclaiming the worthlessness of the efforts of those individual writers who, "yielding to the impatience of vanity," attempted to set up so-styled "independent" systems of philosophy. Now, almost from the beginning of his acquaintance with the works of Hegel (in 1856), Stirling felt convinced that, as he expressed it himself, it was "in the vessel of Hegel" that the Historic Pabulum was contained. Not, of course, that it had *originated* there—however new and original the form which it took in the hands of Hegel, the Historic Pabulum had undoubtedly come to him from those of his immediate predecessors, Kant and Fichte, if not also of Schelling; and therefore a thorough assimilation of the Historic Pabulum involved a careful study of the works of Kant, Fichte, and Schelling, as well as of those of Hegel. It was, however, as little more than steps in the stair leading up to Hegel that Stirling regarded those other three German philosophers. Hegel, he held, had so transformed and transfused the result of the labours of his predecessors as to have created "essentially an entire new philosophy . . . perhaps the beginning of the end of philosophy at all!" (*What is Thought?* p. 327).

Writing to his friend, Dr. C. M. Ingleby, in 1869, Stirling says with regard to Hegel, "he always proves his student's *fate*. After Hegel, all else is so tame, insipid, colourless—so plainly mere verbiage!" Of the truth of this remark Stirling's own life is a striking proof—it may almost be said to have been given up to Hegel. After 1851, Stirling had no professional claims on his time; after 1857, but few social distractions. All the time and labour which other men are bound to expend in office, or work-room, or lecture-hall, he devoted to the study and exposition of

Hegel, of whom he thus acquired such intimate knowledge as probably was possessed by no other man—admittedly no other in this country.

He possessed all Hegel's works, and all of them bear the signs of frequent handling, and most of them contain notes in his own writing. As might be expected, the *Æsthetik* and the *Naturphilosophie* have evidently obtained the smallest share of Stirling's attention, but even with these works he proved himself to be familiar by his article in *Macmillan's Magazine* for October, 1867, on the "Symbolism of the Sublime," and his *Vindication* of Hegel against Whewell and Robertson Smith, published in 1873. The *Phänomenologie,* too, he knew well, and regarded as "even a wonderful work, a unique work," though he held that it does not form the true gate-way into the Hegelian System—is not "a necessary integrant of the System" (*What is Thought?* p. 382)[1]—and moreover that it "cannot, for difficulty, by any other work of Hegel be surpassed". But perhaps of all Hegel's works it was the *Rechts Philosophie* which he regarded with the highest admiration. When he went to the country for a brief month's holiday, he must take the volume with him; and it is in reference to it that he writes, in 1870, to Dr. Ingleby, "Ah me! What wisdom, and wisdom for the hour that now is, and not the slightest dream of it in England to any one who has not read something of my own."

As the result of his close study of Hegel, Stirling applied the Hegelian doctrine to almost every sphere of thought and of human life. It formed the philosophical support of his religion (again and again he declared that, with regard to religion, he belonged to "the Hegelian Right"—*i.e.*, he was a philosophical Christian); it was the basis of his views on all legal, political, or social questions, the substance, as has already been indicated, of his exhortations to his family.

This also should be added, that he expended on the study and development of the Hegelian philosophy not only his time, his energies—his life—but even a considerable portion of his means. The publication of the *Secret of Hegel* cost its author some £400, which was not recovered for many years.

Yet in the passage in the Note in *Schwegler*, referred to above, Stirling declares, "I have not sought, and do not seek, to be considered a disciple" of Hegel's; and again in the same passage, "Whether that Notion [the Hegelian Notion] be really the pulse of thought . . . that is what I still doubt. So long as that doubt remains, I am not properly an Hegelian."

In weighing the value of the evidence of this, *the single passage* of like import in all Stirling's works, three points have to be borne in mind. *First,* that in the *Schwegler*, if anywhere, Stirling no doubt wished to take up the position of the unbiassed expositor; *secondly,* that the Note was written in 1867, and that there is abundant evidence in the author's later works that he did "accept the Notion"; and, *thirdly* (a fact as yet known only to the present writer and one or two other persons), that in Stirling's own copy of *Schwegler*, which contains many jottings in his own hand, *the two misleading sentences have been entirely deleted by himself.* If it is asked why those sentences were not omitted in subsequent editions of the *Schwegler* (now in its fourteenth edition), the only explanation that suggests itself is that the practical difficulties involved in such extensive alteration of stereotyped plates, appeared to Stirling's unpractical mind insuperable.

Apart from all this, however, we possess unmistakable evidence that,

[1] For this opinion, though opposed by several German Hegelians, Stirling maintained that he had the support of Hegel himself, who expressly withdrew the *Phänomenologie* "from its position as '*first part of the System of Science*'" (*The Categories*, pp. 44 and 55).

whatever doubts he may have had as regards the Hegelian Notion in 1867, Stirling had got entirely rid of them before 1873. In that year he published his *Lectures on the Philosophy of Law*, the first of which a writer in the *Critical Review* describes as "despite its brevity—fifteen pages," "the most luminous summing up of the problems to be faced in philosophy, as well as the clearest and truest piece of philosophical analysis to be found anywhere". In the Preface to the *Lectures*, Stirling declares: "No man till Hegel ever explicitly saw the *Notion*, and no man till Hegel ever built a system on it. This is certainly the most important philosophical achievement that has fallen to the lot of any man . . . for it would be quite possible to represent and demonstrate all philosophy to be but *a series of attempts to find the Notion*, of which only that of Hegel at long and last succeeded." On page 25 of the same volume, this statement occurs,—"*it is the single antithesis of universal and particular that makes the whole world of man* . . . it is the ultimate and absolute secret: it is the *Notion*, the *concrete notion*. No highest philosopher for centuries will have anything to do but to make this notion *explicit*, bring it into full consciousness."

This latter passage must have been written in 1871 (the year in which the *Lectures* were delivered to the Juridical Society of Edinburgh), and it would be easy to support it with others of a similar import from Stirling's writings of the same, or a slightly subsequent, period—from the *Law Lectures* themselves, from *Whewell and Hegel* (which is bound up with the *Lectures*) and from articles in the *Journal of Speculative Philosophy* and elsewhere—as well as from his latest books, *What is Thought?* and *The Categories*.

These two last books contain what the author himself described as his "own special wind-up and best," and Prof. Pringle-Pattison as "the stripping off of the last veil that has hitherto obscured and distorted the view of Hegel". Though the first of the two was not published till Stirling was in his eightieth year, we have his own authority for stating that the substance of them was carried in his mind for over five-and-twenty years—until an opportunity for publication occurred—and they cannot therefore be regarded, or *dis*regarded, as the work of an octogenarian. It is specially, in fact, in *What is Thought?* that we find Stirling's own contribution to philosophy; and it consists precisely in the *development of the Hegelian Notion*. Stirling never made any very definite claim to originality, being content, no doubt, to know that he had assimilated, and made accessible to others, the Historic Pabulum; but the careful student of his works must feel convinced that there is much in them *explicit* which at most is only *implicit* in Hegel—that it is the action of Stirling's mind upon it which has converted the triple spectrum of the Hegelian Notion, with its suggestion of the laboratory, into the white light of a "living principle".

A. Hutchison Stirling.

THE LATE LADY WELBY.

We are requested to state that a biography of the late Victoria Lady Welby is in course of preparation. It is hoped that her friends and correspondents may be willing to assist by placing such letters as they may possess at the disposal of her family. The greatest care will be taken of the letters, and they will be returned to their respective owners intact at the earliest possible date. In the absence of any definite expression of wish to the contrary it will be assumed that the loan of the letters implies permission to publish where deemed desirable.

The letters should be sent to Sir Charles Welby, Bart., C.B., Denton Manor, Grantham.

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

I.—COLLECTIVE WILLING AND TRUTH—(II.)

(*Continued*).

By S. Alexander.

10. *Moral Evil and Error.*—Since believing is speculative willing and true believing, as before set forth, is approved believing, and true beliefs or truths are what it believes, and since all willing has for its object propositions, the nature of moral evil serves as a clue to the nature of error. Of course, in describing evil with this purpose in view, it is difficult to make sure that preconceived ideas as to the nature of error have not already intruded into the account of evil; if for instance a man's mind is full of an account of error like Mr. Bradley's. Still it is possible, without any theory of moral evil, or of how the distinction of good and evil arises; on a mere inspection of what moral evil is; to say that all wrong-doing is a misplacement of elements in human nature by which what is useful for one situation is acted upon in circumstances for which such action is morally unsuitable. To levy money from a man is under certain circumstances right; but if the tax-collector, or another, steal it, the act is wrong. It may be right to inflict pain on a person, as in surgery, but under inappropriate conditions that pain becomes an injury. The killing of animals or even of men is commonly thought to be legitimate and useful in its place, but to take a man's life by murder is a misplacement of such action. Even a vegetarian who thought all taking of life wrong would have to admit that the taking of life is an ordinance which occurs everywhere in nature; he would have to say that when it is extended to the voluntary taking of any life by human beings it is misplaced.

It is safe to say that there is not a single feature of wrongdoing which is not contained somewhere in good human nature in a different combination. The evidence of this is that moral condemnation seeks to reform the wrongdoer, and implies that with modifications he can be utilised for the purposes of society. Even the irredeemable wrongdoer is only regarded as irredeemable for the particular society or type of society in which he exists; we still think of a larger whole in which he is somehow made serviceable, or as we say redeemed. We remember also how some kind of wrongdoing is a survival into new and wider conditions of society of practices which were once respectable: how lying was once legitimate within limits, and killing to avenge was a duty. We can think therefore of a redistribution of human passions and capacities which would turn the immoderate or insufficient impulses to good purposes, as if the burglar and the timid and ineffectual person of good intentions were to exchange some of the enterprise of the one for some of the scrupulosity of the other. Either by readjusting the relation or proportions of impulses in the one individual or readjusting them as between different individuals, human nature would secure goodness and misplacements be removed.

But true as this is, it does not state the whole case or perhaps the most important part of it, and might suggest that evil is a mere chance combination of unsuitable elements. Misplacement, *e.g.* the combination of my desire to retain my property with your attempt to steal it, would not be misplacement were there no moral connexion between the elements thus combined. The evil act is a wrong response to a certain situation (my possession of my property), but that situation contains elements of such a character that the inappropriate or the evil action would under certain circumstances other than the present ones be *right*. Property, for instance, requires alternative methods of treatment according to conditions; as purely private it admits no interference, but it is subject to taxation; and among possible alternatives (for as we are dealing with practice we have to take into account alternatives that perhaps never have occurred or will occur but which are consistent with the spirit of right practice and would be right if they did occur) may be the forcible entry which would then be legitimate though under the conditions of burglary it is evil. Thus it is some character of the good institution (or the good impulse corresponding to it) which itself admits alternatives, of which one is that which we call evil because it is not the suitable alternative.[1]

[1] See note on p. 164 *infra*.

It is in this completer sense that evil action is misplacement in the elements of human nature, and its object and its consummation constitute a result which, while actually existent and true, is inconsistent, as it stands; until the misplacement is corrected; with the maintenance of human nature. It matters not how that ideal is conceived. For the above statement of wrongdoing is consistent with any theory of the moral end.

Now we cannot indeed pass at once from practical willing to truth. For good practical will has for its objects not true but good propositions, and the proposition produced by a bad act is true though it is bad. Truth is the object (we exclude again for simplicity those true propositions which are the *contents* of true willing) of right speculative willing, *i.e.* of right willing in its speculative aspect. Error, or erroneous judgment or belief or propositions, is the object of a defective speculative will. The boundaries between practical defects of thinking and purely speculative ones are difficult to mark, and we have yet to consider the interrelations of true believing and practice. In so far as a practical defect, like unconscientiousness or haste, is reflected in the speculative will, we have the foundation for Descartes' doctrine that error is the intrusion of willing into judgment; I should say, the intrusion of practice into the province of speculation. But this is not always the case. Take the example of speculative bias in favour of certain things, *e.g.* muscles in psychology, distorting our judgments. This means that certain of our ideas assume a disproportionate place in our speculative life, just as, say, alcoholic appetite may assume a disproportionate place in our practical life. Here we have pure speculative defect. Still whatever the source of the defect, whether in the senses, as in colour-blindness, or in the feelings, or in predilection for certain ideas, so far as the defect issues in error, that is false propositions, the defect is one of speculative *will*.

We can therefore now apply to error what we have learned about the object of moral evil. Error is misplaced truth. The elements of the proposition have always their foundation in actual truth, though the misplacement itself is not true or real. Such misplacement is, as in the case of bad conduct, of two kinds. But always it is a failure of the sense for fitness in reality, a want of speculative tact. Sometimes the error lies in misdistribution. Redistribute the elements of error, place them in the combinations in which they do really exist, and the errors are corrected and become truths. The defective will of the inquirer has connected what nature has disjoined and disjoined what nature has connected. It is

like Plato's unskilful carver, who does not carve the animal at the joints. Sometimes again the fault lies not so much in misdistribution of real materials as in the disproportion of them. Something is overlooked or underestimated or something is put into excessive prominence. There is incompleteness or excess, and one part of the business of science is to save us from such errors of over-emphasis or of omission; just as moral education teaches us to balance one impulse against another so as to bring them into harmony and establish a central control. Excessive prominence given to one idea may properly be called misplacement of truth, for the idea in question is present in the reality, but there are other ideas present as well. Thus misplacement of truth consists in incongruity, defect or excess, and it is corrected by redistribution, by supplementation and by diminution, respectively.

But it is not to be supposed that the misplacement is wholly arbitrary; that the elements which are brought together in the erroneous proposition are entirely disconnected in reality. On the contrary the erroneous combination has its foundation in reality. We cannot assert A to be C even erroneously unless A is in some way really connected with C. There must be something in A (or C) in virtue of which it is intelligible, however remotely, to join A with C in a proposition. What was said of moral evil applies perhaps more obviously here to speculation. In the speculative error, not only is A real and C real, but A must be such as, or must have a character which is such as, to admit of being C, though not in the given case. It admits of alternative connexions of which C is one. The thing has colour of some sort, let us say, but it is erroneously judged to be red rather than green. The error can be committed only because there is a real disjunction of colour into red, green and others. Some one of the alternatives must be chosen, and the wrong one is chosen. This is in fact involved in the conception that in error materials of reality are wrongly interconnected, for they would not be the materials *of judgment* at all could they stand by themselves, did they not rather exist in situations with the other elements of which they are continuous on some ground or other.[1]

[1] The important point mentioned in this paragraph (and in the corresponding passage about practice (p. 162)) I had not realised when I wrote my remarks on error in "Sensations and Images" (*Aristotelian Society*, vol. x., 1909-10). I am indebted for it to Mr. Stout's paper, "The Object of Thought and Real Being" (*Proceedings Arist. Soc.*, vol. xi., 1910-11, and also Report of Fourth Philosophical Congress, Bologna, 1912). I accept his doctrine of the existence of real possibilities in the sense in which I have taken it above, that disjunctions are real (*cf.* B. Bosanquet on "Disjunctive Judgment," *Logic*, vol. i., bk. i., ch. viii.).

Thus not only are the materials of error real, in the sense that they belong somewhere in the real world, but their connexion also as it exists in the error is founded on a real connexion in those materials in the real world in the sense which has now been explained; but the error itself is not real. No blessing from a sober brow will convert the error into reality except by expanding or reducing its elements, or as it were redistributing the type, or by all three processes. But if it is an error about objects, the error though unreal is still objective or extra-mental. It claims to be true or real, but is not. What is thoroughly real in error is its counterpart in the will, which is erroneous believing and is a mental reality. Of this more presently. Finally, what is said here of error applies with necessary changes to illusions (which are not misjudgments) or to mere mistakes of sense. They too are objective, and they too are appearances of real things, but they are not the appearances of the things which they pretend to be. The green which the colour-blind man sees in a red object is objective, and green colour is real, but the mistake lies in his seeing a green object where there is a red one.[1]

We have arrived at this result by passing, according to the principle we have followed throughout, from the character of the willing to the nature of the error which is its object, which is willed. The same conclusion can be reached by another method; by following the principle that when both mind and external things present an identical feature we may sometimes, perhaps always, most easily study it in the mind. Let us then take mental propositions which we have left out of account save as the real mental counterpart of the objective error. Consider mental errors; errors about our own minds. To take an example: a man has committed a trifling peccadillo; and I say I was indignant with him because I disliked his action. The truth really was that I bore the man malice and seized on the fault as shocking my sense of duty. I am not lying, but do really deceive myself into thinking what I say. Thus this act of judging is a genuine state of mind, but it is an error. It is erroneous because though the offence to my sense of right is present, I connect my indignation with it instead of with the malice which I really felt but overlooked in the judging act. Thus the judging is a real event in my mind, but it is also erroneous, because it takes feelings which really exist in my mind and displaces them. This appears to be a self-contradictory result. But the reason of the paradox is that my judging is not here, as

[1] Compare "Sensations and Images" (*Proceedings of the Aristotelian Society*, 1909-10, vol. x.).

in the case of error about objects discussed hitherto, directed upon a non-mental object different from it, (or rather we are not now considering the non-mental proposition corresponding to the mental one), but the mental proposition believed is the *contents* of the judging and not different from it. But of course the believing is not real in the same sense as it is erroneous. It is real as having actually occurred, it is erroneous as inconsistent with my whole mental condition; and consequently when I judge it subsequently, after my error has been dispelled, I say that this proposition occurred, but it did not represent my mind truly. On the one ground I regret it; on the other I declare it to have been false.

Turn now to objective error, and with this clue in our minds we recognise that it is founded in reality or truth, from which it draws its materials and their connexions, and that it is erroneous through displacing them. The proposition itself though false or unreal, as such is objective and claims to be true. But in this case the proposition believed is a separate and distinct reality from the act of will which believes it, and this act of will is a real occurrence in the believing mind and is not itself an error. The error lies in the object proposition.

But if any one chooses to think this second clue less intelligible than the labyrinth itself, let him merely regard the foregoing as an application of the original account of error to the special case of error about ourselves.[1]

[1] This account of mental error might seem for a moment inconsistent with the contention of section 6, p. 36 (vol. xxii.), that for a mere individual there is no error, but at most misadventure of faith. For a man's own mind is open only to his own inspection, and how therefore can there be error in what is merely enjoyed? But there is no real inconsistency. The individual can enjoy (or suffer) error as to himself (*i.e.* in himself). But he is no mere individual like the case we supposed. On the contrary he is familiar with objective errors, and error as to oneself is in fact a late discovery compared with error as to non-mental things. And secondly he has the notion of other minds which acknowledge his own and for whom his own enjoyed error has a meaning and to whom it can be declared in words; and if that were not enough, he can from his consciousness of other minds think, in enjoyment, of his fuller and true self as actually condemning his real but erroneous self; a thing not open to the mere individual.

It is more important to use the analysis of mental error to illustrate the meaning of the incoherence between an objective error and other propositions as to the non-mental world, as discussed in section 5, pp. 31 ff. The false proposition it was said was as objective as that which it conflicted with, but it was physically incompatible with it. And experiment decided. It was pointed out that the physical properties implied in the true proposition rejected those implied in the error. It was difficult to understand this just because the non-mental propositions are objective and not mental, and it seemed at first sight absurd to talk of incompatibility between a real proposition and an unreal one. But now in the case of

So far we have been considering evil and error as the one tends to throw light upon the other. But there is a difference between them. Moral evil exists really both in the will and in the object of it or its result which the will brings into existence. The bad proposition is real as much as the good proposition. The murdered man is killed and the bad will effects a real or true occurrence. On the other hand, error really exists in the will, but it does not as such really exist in fact, unless the error be an error about mind. Thus wrong speculative will has for its object untruth; but wrong practical will has for its object a true proposition.

At the same time though evil in this way diverges from error, evil is constantly tending to become error. In so far as goodness tends to extirpate evil, by disapproval and ensuing attempts at reformation, it seeks to prevent evil from becoming true.

We cannot therefore identify the object of good practice, as opposed to evil practice, with true existence. But there is still a department of truth or reality which is the object of good practice, namely true social existence. Relatively to social existence, evil is error and does not really or truly exist. It is erroneous in the same sense as we saw that a mental proposition which judged the mind itself was erroneous. True human nature as realised in society is the truth which is the object of good willing, or more strictly its ideal.

11. *Relations of Truth and Practice.*—This conclusion brings us at once to the question of the relations of truth and practice, which are highly intricate, and at first sight contradictory. (1) For in the first place practice seems to be only one portion of truth. Every practical volition (and the same thing is true *mutatis mutandis* of all practical action) creates an object which is also the object of a judgment. The will and the belief have the same object, though the practical will and the speculative one are not in all respects the same act. And since the object of practice and its results are the creation of the practical act, they become thereby a part of the system of truth, though not necessarily of the truth of human nature. It is as much matter of fact that the object of murder exists as that the object of a good act does; and we have seen the

our own minds we actually live through the error and its annihilation. But here both the truth and the error are also on the same footing, only both of them real, and yet one an error. The state of our mind did not prevent our making really the false judgment. But tested by the experiment of the fuller facts, the judgment, my act was determined by indignation, could not consist with the judgment, my act was determined by malice, and it thereupon was annihilated.

bearing of this upon the relation of evil and error. Moreover the practical act itself, apart from its object, is a real existence, and there is a science, or body of truth, which deals with such acts. From this point of view truth, which is all propositional existence, includes practice, as well as the whole system of sub-human facts.

But (2) from another point of view practice includes truth. For truth like beauty is one of the goods of life; as constituting the basis of a satisfaction of persons it is a component of the ideal called the Good. Material, intellectual, æsthetic goods are all alike and in the same sense part of the system of satisfactions. But not only is this the case, but also the pursuit of truth, the exercise of believing, has itself a practical side as well as being essentially theoretical. For the believing volition itself arises out of the instinct of curiosity, which seeks to be satisfied in the same way as the appetite for food, or as acquisitiveness. Believing, from this point of view, falls into the whole system of practical actions. Hence there is a practical or moral excellence of thinking, which consists in maintaining the conditions of efficient believing. Thus morality says exercise your intellect; and condemns as immoral carelessness or neglect or unconscientiousness in thinking. It passes these judgments not only in the case of men specially gifted whose vocation it is to discover truth, but also wherever careful judgment of real existence is required for the purposes of practice or in so far as the attainment or appreciation of truth is regarded as a part of the Good too precious to be neglected. It is able to do so just because the impulse to knowing is acknowledged by men in their relations with one another; and again because demands are made by certain persons for special freedom to gratify this impulse and are approved, and correspondingly demands are made upon them to give fitting scope to their special gifts. Just as self-support is approved in all and a failure in the effort after it condemned, so speculation is approved in certain persons as a right and exacted as a duty; and within limits and so far as is convenient is exacted from all according to their qualifications. Thinking is in this sense as much a contribution to good practice as honest dealing or temperance. The practical side of speculation is distinguishable from the purely speculative side, and its practical excellences or defects from its purely speculative ones. It is not wrong morally to be in error on a fact of physics, to be colour-blind, to fail of understanding from insufficient training. These are defects in the speculative will. A surgeon who cuts across a vein from ignorance may be an unskilful and in that sense a bad surgeon, but he is not

therefore a bad man, even in respect of his surgery. We have moral defects in thinking in so far as the thinker fails to respond to the demands made upon him by himself or others in respect of the exercise of his thought; for example through laziness or prejudice. The defects which make him an unskilful thinker are the idiosyncracies, no matter whence derived, which make him irresponsive to things, and consequently set him at variance with others in so far as they exercise the same form of willing; and prevent him from securing the acknowledgment of his speculative propositions. The two sets of defects are sometimes easy to distinguish and sometimes not. Prejudice which it is wrong morally to encourage is different from the bias of special training or temperament which may lead a man into error but may also be the happy stimulus to discovery. But defects of temper and character and defects of insight may shade into one another and certainly they are not without influence upon each other. But in so far as we can thus separate the moral side of thinking from its character of skill, thinking is a single department of practice, and included in it.

(3) But again it would seem that practice is supreme over truth, because practice makes use of truth in order to guide action; and hence it is that insight or wisdom, that is the knowledge of the nature of things in the world in their bearing on human action, and of human nature itself, has always been regarded as an essential ingredient of virtue and sometimes even as itself a virtue. On the other hand, practice in its turn is needed as in experiment for the discovery of truth, though such practice is not so much a part of moral practice as rather the rules of a handicraft or art subsidiary to theoretical willing.

Thus we seem to be involved in the contradiction that practice includes truth and that truth includes practice. But the contradiction is only apparent and both statements are true in different meanings. Let us recall an illustration just used. If your vocation is that of a surgeon, you are a bad man if you do not make yourself as good a surgeon as possible, or if you are careless in your work, or the like; but you are a bad surgeon if you are unskilful, and possibly your unskilfulness may be so great as to disqualify you morally from being a surgeon at all. Now if we consider practice teleologically, or in its human interest, truth is like surgery and is technical. Correct believing is the rule which we must follow to know the world, and is a means to right living. Truth itself or right beliefs is material used by practice in order to live well. But knowledge is not merely

a means to the attainment of practical ends, it is itself desired for its own sake; the possession of science, its use, the appreciation of truth or its enjoyment, these are part of the ideal itself, of the Good. I will to have truth; that is practical and part of good living. How then can we say that to have science is a means to the end, when it is also a part of it? The answer is that science is not good in the same sense in which it is true. It is good in so far as it enters into the system of human satisfactions, and hence it may on occasion conflict with other human satisfactions, or its pursuit may even have to be abandoned. It is true in so far as it obeys its own nature. Science is a good thing to have and use; but I possess it in so far as I have skill. Health also is something which I will to get; but the means to get it are not themselves right practice but are rules of prudence founded on knowledge. If right living is in Kantian phrase a categorical imperative, correct believing is a hypothetical imperative. The categorical imperative says be just, be temperate; it also says be healthy, seek truth. But the imperative, to be healthy you must take exercise, is a rule of art and hypothetical; and so is the imperative, you must believe A and not B, or you must observe the precautions of scientific method. Knowing is one of the arts by which man uses the material of the world in which he lives, partly to satisfy his practical instinct of discovery (and afterwards this material is used for its own sake and is then called science or knowledge); partly in order by the use of it to satisfy his other impulses. In both cases truth is technical, whether we consider the search for it or the body of truth itself. This is because practice in all its departments, including the impulse to science and to art, is man's life, and is creative, and by practice man lives his own life and grows as a person and alters the world in which he is placed and brings new truths into existence.

For man then as a living person truth is subordinate and technical, but when we take another point of view, the case is altered. A superior being would contemplate us as one part of our world. And though we cannot contemplate but only enjoy ourselves, yet as enjoying beings we in virtue of our own experience take our place as one kind of existence in a whole which includes us.[1] That world including us, so far as it is a system of connected propositions, is truth or true beliefs, some contemplated, some enjoyed. Practice is now one part of real existence. And so far as that world is open to our experience, practice is still the highest thing in the

[1] See above, sections 8, 9 on mental propositions (MIND, vol. xxii., pp. 39 ff.).

system, for it utilises for its purposes the rest of the known world, partly by way of direct reaction upon it, partly by the help of knowledge (or the æsthetic or religious experience). Practice is not now a means to truth as before we declared truth to be technical in respect to practice. It is not even a means to the search after the truth, which is only one part of practice. The only sense in which practice is a means to right thinking, to science, is that in which each part of the system of right living is needed to sustain the rest. The strength and purity of character which make goodness in other respects are in the end necessary for successful discovery of truth. But truth is one thing and its discovery is another. Practice is thus from the larger view, which takes account of man as one part of the system of finite existences, merely the highest part of finite existence as known to us; and from this point of view while the discovery of truth is but one direction of practice, truth itself is the larger whole which includes practice.[1]

12. *Beauty in its relation to Goodness and Truth.*—Though the subject does not strictly fall within the scope of this paper, it is hardly possible, when we are dealing with the relation of truth and goodness, to avoid touching on the relation of both of them to beauty. But I do so with hesitation because of my imperfect study, and mainly for the sake of completeness and

[1] This discussion helps also to remove the difficulty which is felt in adjusting the claims of truth and practice, on any theory in which speculation is regarded as an independent form of mental activity. It is urged that when we are inquiring into truth, reason is supreme, and is the sole judge, and accordingly the claim of practical needs to find reality in what satisfies them is inadmissible. For us both practice and knowing are concerned with certain existences. Truth is the name for a body of cognita. The contrast of knowing and doing is a secondary one, and in this matter raises a false issue. Knowing for us is not open to the charge brought justly or not against "intellectualism" of disregarding the practical side of our nature; for it is essentially willing. Hence when we declare that truth includes practice, it is merely in the sense that all reality (so far as we humans can discover it) includes that special part of reality which practice in the narrower sense makes and finds. Truth is supreme not because in science we are concerned with reason and in practice with will, but because truth is the object or the contents of all practical actions in which we are engaged upon reality or in which we are ourselves reality. Further if it were urged that having a sentiment, *e.g.* the religious sentiment, we must postulate the reality of its object, this would not be the illegitimate intrusion of practice into the realm of thinking, it means simply that the emotion in question, like a perception or an idea, is directed upon an object, independent of the mind which has the emotion; and the sole question would be whether this object is true, that is, can sustain itself in the whole complex of truth: whether that is the idea of God which is the non-mental object of the practical act of worship is merely an idea and possibly erroneous or has its sensory relations with the remainder of the world of cognita.

because what is said here of beauty, imperfect as it is, may help to make clearer what has been said above (sections 8, 9), that mental and physical facts or existence are coordinate parts of reality; that reality contains besides non-mental existences or propositions, mental existences or propositions coordinate with these. It will be seen that reality contains another order of existences as well. The words beauty and beautiful are used here loosely to cover all æsthetic categories of objects, the beautiful in the strict sense as well as the sublime, the ugly in art, the tragic and the like. I suppose beauty then to stand in one respect towards pleasure in the same relation as truth stands to believing, that it is social or disinterested or impersonal, is the object in Kant's language of disinterested pleasure: wherever the pleasure of possession of the beautiful object intrudes, the pleasure is so far not æsthetic. But in another respect the relation of the mind to the object is different from what it is in truth or goodness, and this difference appears to determine the fundamental character of beauty.

For truth, the mind which knows is merely instrumental: the truth is revealed to it. (For simplicity sake I confine myself to non-mental truth, leaving the reader to make in the light of what has preceded the necessary correction for mental truth.) The acts of practical will are not merely instrumental but constitutive, and the moral ideal consists wholly in the satisfactions of persons and is thus a mental existence. But beauty is a complex in which the mind and the non-mental object are both ingredients. Whereas truth of external objects is non-mental and goodness is mental, the beautiful is an existence which implies a combination between mental and non-mental existence. That such combination is possible, we know from the case of the person, which is the complex of mind enjoyed and body contemplated; in which mind and body form one whole.[1] Besides mental existences and non-mental existences there is another order of existences in which mind and non-mind are connected in a more special relation than the mere ubiquitous one of compresence. When the connexion is such as to be impersonal (such as to excite in the mental partner the impersonal feeling of pleasure), we have the order of beautiful existence. Hence it is that æsthetic production (and the same thing applies to æsthetic appreciation, which is sympathetic production, just as the appreciation of truth discovered by others is sympathetic discovery) appears to occupy an intermediate position between practice and speculation. It produces and is so far

[1] See *Proc. Aristotelian Society*, "Self as Subject and as Person," vol. xi., 1910-11.

practical, and like practice it finds or discovers what it produces. But also it may find its object in nature and select it from nature, and so far it is like speculation and finds its object. Hence too we may understand, from the essential participation of the mind itself in the beautiful, why variations in æsthetic appreciation differ so much from variations in science. Science varies in the main through growth of knowledge. But beauty while it also varies with knowledge, which reveals new beauty and enriches old, may do so, without change of knowledge, through the change of mental attitude. A change of interest does not alter the truth of an object, but it may alter its æsthetic character. Beauty is not subjective wholly, it has its non-mental object too; but in beauty more particularly the judgment of value is an affair of "psychological climate".

To contrast beauty with truth is the easiest way of exhibiting the distinctive character of beauty as an existence in which object and impersonal subject are combined in one. Truth is independent of, beauty is inseparable from, the contemplating mind. A beautiful face in a portrait supplies in itself mere colours and form to the eye, but its expressiveness (let us suppose that its beauty is not wholly one of form and colour) is supplied by the mind. Now this same expressiveness may belong in reality to the real person represented, in correspondence with our experience of that person, but it does *not* belong to the face itself as painted. It belongs to the painted face only in so far as that face is blended with the mind which interprets it, and the seen object is organic to the characters supplied from the presence of the contemplating mind and felt by that mind. This appreciation of the face is very different from the intellectual recognition that this is the face of a person of such and such a character, where the object is independent of the subject's presence. The ideas (under which I include "ideas" of character or personality) with which we supplement our intellectual perception of an object actually belong to the object itself; but to the picture they are suggested or imputed.

Proceeding then from the beauty of the work of art, we may it seems affirm that natural objects are not beautiful in themselves as they present themselves to eye or ear (or other senses), but because of the indispensable participation of the contemplating mind, and of what it reads into the object from itself. The real, beautiful face, as we perceive or know it, has not the character we impute to it in judging it to be beautiful, though this character may as a matter of fact belong to the person who owns the face. The graceful move-

ments of the cat or dog are seen at most to be alive, but the vitality or fulness of life which we add in appreciating their beauty, and add from our own experience of vitality, does not belong to what we see; though as a matter of fact it may be there and further knowledge may inform us so. A human being may actually possess the characters which are imputed to him from the observer who finds in him the ideal of beauty. But that he truly is what makes him beautiful is accidental and does not affect his beauty. The perceived man has not as merely sensibly perceived or even thought about the characters needed to make his perceived features expressive. These come from the mind which finds him beautiful.

There are indeed forms of beauty which might seem to depend wholly on form or colour in their harmonious distribution; and these might lead us to believe that beauty consists in mere variety in unity of the object itself as illustrated by the line of beauty, or the rectangle whose sides are in the ratio of the golden section, or the blending of shades in a rose. Such formal beauty is the limit where the objective element is greatest and the mental least. But even here, while to the object itself such terms as adjustment apply, beauty applies to it only in virtue of the mental co-operation which breathes living reality into a bare juxtaposition. Even a simple colour or tone may, besides the sensuous pleasure it gives, acquire an æsthetic flavour through the response of mind which reads into it purity or self-containedness.

Thus while truth is internal coherence between the characters of the cognised object, beauty is the relation of coherent unification between the object cognised and the contemplating mind. Primarily the beautiful is the coherent or unified complex of the object known, in so far as known, and the imaginative disposition of the mind. Secondarily this coherence assumes two forms. Since to the mental disposition there correspond or may correspond ideas attributed to the object, and since to the cognised object there correspond cognitive conations on the part of the mind, the coherence may be represented on the mental side as between the conations which understand the object and the supplementary conations of the imagination;[1] or on the side of the

[1] It is obvious how close the above remarks on beauty come to Kant; they read to myself, though not so reached, like a translation of Kant's doctrine, with the necessary (and serious) modifications, into the way of thinking adopted in this paper. I owe much help to Mr. Bosanquet's *History of Aesthetic*. No attempt is made to deal with the doctrine of *Einfühlung*, though some things in this section have been suggested by my reading of Prof. Lipps' *Aesthetik*. This is only to repeat the confession of imperfection. But my object in raising the topic at all is a limited one,

beautiful object as between the elements presented in sense and the ideas read into the object—the method used in the last paragraphs where we were describing the nature of the beautiful object. In the one case we trace the source of the æsthetic pleasure, in the other the full character of the object in so far as beautiful. But both these forms of coherence imply the primary and essential coherence of the two forms of existence, mental and non-mental, the mind and the object.

This account of beauty appears to include with the ancient formula of unity in variety the more modern notions that the beautiful object is expressive, both in the sense of being expressive of the artist or contemplator and in the sense of embodying in its union of known and imagined elements some characteristic, significant, individual form of existence. The word 'include' is used advisedly: these features are not alternative aspects of beauty but are needed to supplement each other. Expressiveness or characteristic individuality is not enough; for it omits the material elements without which beauty does not exist. But neither is unity in variety enough. It would not serve to distinguish beauty from truth. Into the æsthetic coherence or unity there enters a variety of which one part comes from the object and one part from the mind; and these elements are so combined that the characters of the mere perceived object owe their unification to the characters supplied from the mind: they are not unified in themselves. Consequently the coherence which is truth, not being composed (except accidentally) of the same elements, is a different coherence from that which is beauty. It is because of this that the beautiful object fashioned by the artist is never a natural one; and the natural object is never except accidentally beautiful in itself. For if the repetition may be pardoned, the Hermes is for truth a marble block of a certain form; it needs for beauty the addition of imaginative elements which are not in the block, though they determine the form of the block. And the beautiful natural object always implies addition or subtraction by the mind. To put the same thing in another way, to get beauty we must take truth and either add to it material elements which it has not or subtract from it material elements which it has. The famous saying that beauty is truth, truth beauty, is therefore only true in a sense analogous to that in

to show that besides mental existence there may also be a complex of mental and non-mental. This I believe remains, however faulty and provisional some of the above may be.

In speaking of imagination, where the imagined elements are the representation of human character, I am using imagination with the interpretation given in the note 2 to section 2, page 20 (MIND, vol. xxii.).

which it is said that goodness is truth. Goodness is social truth. Beauty is, we can but say, æsthetic truth.

The beautiful relation is apprehended in feeling, and the beautiful complex is primarily of a perceptual character. But it is plain that, into this complex, propositions (and not mere percepts) may enter in the most various ways. Some of them may enter into the mental or subjective constituent (as especially in lyric); some of them into the object (as especially in drama) and the coherence of the two sides of the complex may itself take the form of propositions embodying the express relation of the two sides. But these matters are secondary compared with the salient character of beauty that in it mind and object are impersonally connected into a whole which is in this sense coherent.

It is more relevant to note that as a science, æsthetics like any other science is a systematic ordering of certain propositions. These propositions declare, they are the facts that, such and such objects are beautiful, or more generally they embody the conditions under which æsthetic pleasure or displeasure is obtained. Such propositions are neither mental simply, like those of psychology or of ethics, nor non-mental like the propositions of physical science, but are propositions containing both mental and non-mental existence which may fitly be called æsthetic propositions.

Recognising beauty then as another form of coherence along with truth and goodness, we can resume the subject of the last section and consider how beauty is implicated with the other two. As regards goodness, there is a morality of artistic activity as there is of the pursuit of truth: there is an impulse to beauty which finds its reward in the beautiful object and takes its place in the system of good activities or of the Good. Moreover what there was said of truth can be repeated of beauty: in respect of the human end, æsthetic activity is technical, and though beauty is a part of the good, it is not Good for the same reason as it is beautiful. As regards truth, beauty has again a twofold relation. It is a part of truth just as goodness is; both in the sense that beauty enters into the world of existence and in the special sense that as goodness is the truth of human nature, so also beauty is a specific form of truth, whether the beauty expresses the true nature of a crystal, a plant, or Athena. But while beauty is thus one part of truth, truth is an ingredient in beauty, and what is beautiful for feeling is expressible for the intellect in coherent propositions. And here again beauty is not true for the same reason that it is beautiful; and in respect of beauty, the coherence of true propositions is technical as well as in respect of goodness.

But again while there is a goodness and a truth of beauty, beauty in its turn is an ingredient in truth and goodness. There is an intellectual beauty in a theory like the Newtonian or in some theorems of geometry or in some scientific methods; and there may be beauty in good actions, like the grace we find in some delicate act of consideration or the sublimity of Regulus. In these cases the æsthetic feeling may be distinguished in experience from the logical sentiment or feeling of truth in the one case (such a feeling as we have when the intellect expands through linked and ordered propositions or resolves contradictions or exceptions), from the sentiment of moral approval in the second case. But the conditions of the æsthetic feeling involved in such cases are not easy to determine. So far as I can judge we appear to treat the beautiful intellectual product much as we treat a piece of natural beauty. The propositions constituting the true object (or the data which are unified in them) take the place of the æsthetic sensuous material. But the æsthetic appreciation does not consist in the cold reflection that the given theorem coheres with others in a body of truth, or that the theory is a connected body of truth, but rather it consists in blending with the object presented to our intellect something not contained in that object as such, namely the living experience of the contemplating mind, so that the object becomes animated with a purpose or appears to be the creation of some constructive mind. Similarly with the beautiful or sublime moral act or character. When we feel æsthetic pleasure in it we do not merely feel approval of it, it does not simply fall in with our conscience or mass of moral sentiment. We regard it as a work of art, so that the life is a "true poem," as if the rare result were the outcome of some imagined exaltation or refinement of purpose.[1] We are to a certain extent outside the actual collision of wills in which the deed has been struck out. Hence it is not easy to have this æsthetic pleasure when we are able closely to follow in our minds the workings of the subject's character. And again we do not easily feel such pleasure in our own actions, Only a morbidly self-conscious person thinks of his own actions as sublime or even beautiful. When he does he imports into his apprehension (we cannot speak of contemplation here) some imaginative supplement which it does not in itself possess, but which builds up a unity between itself and the enjoying mind. Thus while

[1] Compare what the Pope says of Pompilia in *The Ring and the Book*:—

"The marvel of a life like thine, Earth's flower
She holds up to the softened gaze of God".

the sentiment of truth and that of goodness are neither of them æsthetic, truth and goodness have their æsthetic side, in so far as the more or less unconcerned apprehension of them allows that complex to exist in which the true or good object blends into a unity with the apprehending mind. Goodness and truth are not beautiful for the same reason as they are good or true; just as we have seen that goodness is not true for the same reason as it is good; nor truth good for the same reason as it is true.

In such complicated fashion, truth, goodness and beauty, seem each to imply the other two, and each of them to enter into the other two. But still from the point of view of the whole, truth or real existence as a system of propositions includes the other two, for practice and beauty are but two types of existence, and the subject-matter of truth is all existence whether that existence be non-mental or mental or a complex existence woven out of both these kinds.

13. *Internal Coherence and External Success.*—Truth is the system of coherent beliefs. Under beliefs are included not only all beliefs of the individual, but those of all men; and what is more to the immediate purpose, not only abstract propositions but singular propositions of sense. Hence since propositions are founded on perceptions, and, whether they are sensory or conceptual, propositions imply directly or indirectly at various removes a reference to reality as a whole, true coherence, that is the coherence of propositions, implies the unification of cognita[1] under whatever form cognita present themselves. We cannot therefore say that sensory experience, though it is used to test the truth of beliefs, constitutes the truth of them. We test beliefs by sense in order to be sure that they are not mere ideas which we entertain, that have no sufficiently intimate coherence with the sensory elements of reality. But to regard sense as not merely the test but the arbiter of our beliefs is to commit a twofold error. In the first place, the sensory experience by which we verify or reject is itself composed in part of judgments and is not wholly sensory. I verify the judgment that the velocity of light upon a theory is x by comparing it with the judgment of perception that the velocity as measured is such and such. In the next place, to make sense the essence of truth is to assign to sense a position, not merely of importance, not even merely a position of fundamental importance, but of despotism;[2] but it is certain that if sense is one element of reality, thought

[1] I am again for brevity speaking of objects and not of mental acts (*cognitiones*).

[2] Compare A. Meinong's well-known remarks on this subject.

is another. We cannot therefore say that our beliefs are true because they are verified in sense (though we may hold them to be false if they are not) but because they cohere with all other relevant beliefs, with their reference to sense included. And consequently when verification is regarded as the test of truth it is not abstract verification which is in question. The verification must be of a certain kind: it must itself be systematic. The verification of a single portion of a theory is not verification; verification takes place only when the verifying data are unified in the light of the theory itself.[1] The process of scientific verification brings the element of sense into its full relation with the element of thought, and saves thought from being merely thought. Agreement with sense does not therefore make truth, but only (under certain conditions in the application of the test) tests a theory. The truth itself lies in the coherent beliefs. The establishment or discovery of the coherence takes place by a process of experiment and hypothesis in which a belief runs the gauntlet of conflicting beliefs and receives co-operation from auxiliary and convergent beliefs. The subjective process by which truth is revealed has been described as the conciliation of the conflicting or co-operant speculative volitions engaged in the process. But I need hardly now repeat that this conciliation of wills does not create the truth but only discovers it. And consequently we cannot say that whatever men at a certain epoch believe is therefore true. For the range of empirical experience is indefinite and requires a constant renewal of the task of conciliation. Empirical beliefs accepted as true are therefore only true under a proviso which limits us to that range of objects. Under that proviso it remains that once true is always true, but only under that proviso.

Thus the essence of truth lies in its internal coherence and not in the test, useful as a test and indispensable in the sense described above, of external verification by sense. The same thing is true of practice, or rather we should say that what here is said of truth follows the clue of practice. I have maintained that goodness is the concurrence of conflicting and cooperant wills, and that what makes character good is this coherence. And as we have seen, coherence in the practical wills has for its counterpart coherence in the objects willed; or in the satisfactions, in the ideal. And the Good became consequently the system of such satisfactions arising out of the operation of the institutions which constitute human nature as realised in society. This method of describing goodness and the good is opposed to those methods

[1] Cp. B. Bosanquet, *Logic*, vol. ii., *passim*.

which in one form or another seek to define good by some external test of success.

One of the most important of these methods is that which finds the nature of goodness in its tendency to prolong the life of society or secure its permanence. This conception stands in the closest relation to that adopted here, for a consensus of practical wills, or an adjustment between the claims of the members of a society means the maximum satisfaction of the claims of those individuals *under the conditions in which they exist.* From this the maintenance of existence follows. To imagine that the mere maintenance of existence, taken by itself, bare abstract length of life, is the real criterion of goodness, instead of being a convenient external test of it, is the same thing as to imagine that a coherent system of beliefs has its essence in the test of sensory experience, when in fact it would not be coherent unless it already included that experience. The good society persists because it is coherent under the conditions of life. It is not good because it persists. Its persistence is a useful secondary means of testing its value by a convenient, indeed the most convenient, feature of the whole. In the same way the successful animal type does not owe its success to its persistence, which is but another name for its success, but it succeeds because it exhibits, under the conditions of its existence, such functions and such a coherence amongst them that it can secure its own life and beat its rivals, who do not possess such qualities or such a harmonious balance of them. They may for instance, like the mammoth, want more to eat than they can get, or they may be too unwieldy to secure the prey which would satisfy their appetites. Natural Selection means that the conditions, whether those constituted by purely physical nature or the presence of other forms of life, select the type which persists; but it does not mean that they create it. Thus success in the struggle for existence is an external mark or test of whether a type is good or fit, but the goodness of the type is found in the character of its organisation, that is whether it can function under the conditions so as to go on living. Nor so far as I can see is there any suggestion in the classical statement of the doctrine of any other interpretation.[1]

[1] This misunderstanding which Darwinism has sometimes suffered at the hands of its friends appears to be connected with a different one which it suffers at the hands of its foes. At the risk of being irrelevant I will mention it here. Darwinism is thought to be indifferent to value. The fittest survives, but that is no more than saying what survives survives. This is a natural conclusion if fitness is taken to consist in survival, but it is otherwise a strange perversion of the text. The fit proves its fitness by surviving among its competitors, but its fitness does not consist in

Similarly in human society, goodness is found in the coherence or harmony of the wills which constitute the society. That harmony makes the society itself good and the individuals who compose it good. The external success in long living is already included in the process by which the coherence or harmony is secured. For the harmony is that of persons who want to go on living, and to go on living in the pursuit of certain ends which they claim to secure. Consequently unless a supposed virtue tends to long living it fails of the essence of virtue which is a disposition to go on in the pursuit of certain satisfactions; and if it does so tend and in proportion as it so tends, it shows itself consistent with other approved practices. Long life is thus a secondary means of judging virtue, because what really makes it a virtue will on the whole issue in length of life. The external test coincides with the real inward essence and the true criterion, and it is easier sometimes to test the whole by a partial feature, because that partial feature must be present if the whole is to exist.

Considerations like these apply, only with added force, if

survival, but causes it. As I understand Darwinism, it is a doctrine of the process by which values are created. The type which survives has value as compared with the perishing competitors which have unvalue or disvalue. And thus the whole series of organic types represents the emergence of ever new types of value. Let us suppose that in some form or other the principle of Darwinism is carried on into human life. It may be there is competition of social groups, or it may be that social types are perpetuated by tradition. I need not discuss that question. Value arises in the contrast of good and evil, however the divergence is effected. Suppose selection to exist then in some form. The series of sub-human values is now succeeded by a series of human values. Moreover, as the series of organic types is the result of natural experimentation, so it is with the emergence of fresh types of human value. It appears to be supposed that we judge of the value of the emerging types by some higher standard, but if Darwinism is true, and we are ourselves entangled in the process, values are only discovered by trial. We cannot rightly require some measure of value by which to measure progress, for progress means a fresh value which we are engaged in creating. The reason why this escapes us is I think that from reflecting on changes of value we introduce the reflective idea into our forecast of our ideals. But in truth we do not desire *values;* we desire new *objects*, and our judgment that a present standard is low in value is but the anticipation of a higher standard which we are engaged in realising. But what the higher value is we can only discover by trying to attain new objects. When that new ideal succeeds it becomes the higher standard of value. If fitness consisted in success, if we aimed at survival, the emergence of new values would be unintelligible. But we do not aim at the creation of value, we aim at realising fresh institutions and habits of life; and the discordant systems become so far evil or valueless. We discover the higher by experiment, following the impulse of the world-process which drives us on. So far is Darwinism in its spirit from being indifferent to value that it is in fact the natural history of values.

we take as the essence of goodness or even as a sufficient criterion, pleasure or let us say even universal happiness. The maximum happiness is a consequence of the maximum satisfaction of the claims of persons for the objects of their desire. The two accounts coincide in practice, but we cannot identify a secondary result with goodness itself. The coherence of satisfactions among persons includes the pleasure or happiness of them; and we may take this partial feature, pleasure, and use it as a test of goodness. We may be sure that unless a proposed ideal produces a maximum pleasure it is not good, and that in proportion to its goodness it will produce pleasure. But there is even then a peculiar difficulty in using the test, which has often been pointed out. For since people desire pleasant objects and not merely the pleasantness of them, we can tell what will produce the maximum pleasure only when their desires for objects are known. Hence, as Stephen said, pleasure may test instantaneous morality. But the claims of persons change and we can only judge what will give them pleasure if we suppose them to remain constant in their claims. It may give greater happiness to allow the franchise to women if they want it, but until they want it, how could we discover that to give it to them would increase the sum of happiness? Thus since happiness depends on what objects men desire, we can never estimate what kinds of objects and in what distribution will secure pleasure, merely from considerations of pleasure alone. In this respect the test of long life has the advantage of the test of pleasure. For we might hope to persuade people to cultivate a new habit or desire a new object by showing them it would conduce to length of life, whereas we could not convince them that it would increase their happiness unless we could first make them want it or the other objects to which it might be a means.[1]

Thus both in practice and in speculation the external test of success is only of value because external success is symptomatic of inward coherence. Unless there is external success the internal coherence is not achieved, but the external success is already embodied in the achievement of coherence.

14. *Success of Truth. Pragmatism.*—The doctrine of success is the conspicuous feature of pragmatism, which declares success to be not merely the test but the intrinsic nature

[1] I doubt if Mr. McTaggart in maintaining that pleasure is the criterion of goodness (*Hegelian Cosmology*, ch. iv.) has sufficiently taken into consideration the indeterminateness of the solution in terms of pleasure unless the characters of persons and the conditions of society are known and constant.

of truth. Truth is true because it works. But it must be carefully borne in mind that according to the statements of the doctrine's exponents, successful working is not limited to practical success but includes theoretical success as well.[1] That is, truth is not true because of its practical usefulness only, but its usefulness may consist in co-ordinating thoughts or getting more truth. Practice has in fact two senses, one in which it is distinguished from speculation, the other in which it includes speculation. In the limited sense of practice, it is clear enough that it is impossible to define truth by practical success so that the two should be used convertibly. What works practically may be regarded (if the proposition is fenced by proper safeguards) as true. But we cannot say that everything which is true works practically. The often-cited proposition that a man is dead, which is the result of murder, is true, but it does not work in practice.

Now, if practice, as declared by the authors of the doctrine, includes the practice of speculation, pragmatism at first sight appears to be reducible to the statement that truth is coherence with all experience. This which has been maintained here and by many others is not distinctive of pragmatism. But the doctrine does not, so far as I can judge, mean merely this, but rather it insists that truth consists in verification of some sort or other and ultimately verification by sensory experience.[2] Till so verified, what pretends to be truth is not real truth, does not bring us into living contact with reality but awaits confirmation by success in sensory detail. Ideas, as William James urges so vividly, serve only the office of leaders up to actual reality as we apprehend it in percepts. Nothing can be more graphic and under a certain supposition truer than his description of verification as a process of 'ambulation' in a continuous progression from ideas to sense. The measure of its value may be got by contrasting it with the notion of correspondence, that ideas are true if they correspond with reality; where the meaning of reality and of correspondence are both left undetermined. Consider it at its face value, disregarding for the moment its context in pragmatic writings. It means that ideas require for their truth (if we may call anything short of a proposition true) integration with sensory constit-

[1] See James, *Meaning of Truth*, "Pragmatist Account of Truth," pp. 184, 206 ff.

[2] *Pragmatism*, "The Notion of Truth," p. 215. "In the end and essentially, all true processes must lead to the face of directly verifying sensible experiences *somewhere*, which somebody's ideas have copied." The position of abstract truth in James's writings is not very clear to me.

uents. This may be regarded as an account of the difference between a mere idea which we entertain or a mere assumption or supposal (*Annahme*) and a truth; and it is surely a very modest doctrine in itself.

But it does not stand alone. If pragmatism meant only this, we could not understand its antagonism to the doctrine that truth is not made by us but only discovered. What pragmatism urges is that practical working (in the extended sense), or verification, constitutes truth. But so far as it does this, it is exalting one element in truth, its sensory element, over the rest. If ideas are only valid when verified by sense, sensory experience in turn can only be used to verify when it is colligated by ideas.

At the risk of repetition, it is well to apply this principle in some further detail to the statements of pragmatism. Ideas are leaders to the reality contained in percepts; this is indeed their cognitive function, and as such they are substitutes for percepts. Now it must be observed that if we speak strictly of percepts, they already include ideal elements, they are full of memory. Except for this we should be landed in the paradox that perception itself is not cognitive. In verifying by percepts we are using ideas. If I take a trivial example it is not out of disrespect but for clearness. The proposition that water changes its state at a certain temperature and becomes solid is verified by the experience of ice. But the test is not from sensory experience pure and simple, for we must first assure ourselves that the solid condition belongs to what once was water. We are verifying the ideal by what is itself in part ideal. The strict verification ought therefore to be found in bare sensory experience. But such experience cannot serve as a test, because it has not the permanence which a test requires. Verification would consist in accumulating sensations, and strictly speaking the only verified knowledge we should have would be what Locke called sensitive knowledge. Thus either the verification is full of ideas or, if it is purely sensory, it is incapable of serving as a verification.

The same neglect of the necessary presence of significant ideas in real verification seems to me to occur if we consider truth according to another favourite method of description employed by pragmatist writers, as the satisfaction of speculative purpose. For what, we may ask, is a purpose? It is a complex of ideas or propositions, objective, aiming at complete reality, but not yet effective or complete. When the purpose has become actualised in perception, it is fulfilled. Now just as an animal's fitness is indeed tested by survival,

but its survival depends on its possession of certain characters which enable it to compete with its rivals (as explained in section 13), so what makes a purpose true is not the fact that it is satisfied, but the particular character of the purpose, without which it would be incapable of fulfilment. The systematic verification of a hypothesis (to use Mr. Bosanquet's language), the significant fulfilment of its purpose, declares it to be valid, but what makes it valid, constitutes its truth, is the character of the hypothesis. To treat satisfaction of purpose as making truth is to exalt the bare satisfaction over that which gives the satisfaction significance.

These remarks are of a logical character and concern pragmatism as a mere theory of method. But to charge pragmatism with exalting sensory experience and neglecting ideas may well seem unjust to those who remember the pragmatic theory of cognition that ideas are substitutes for percepts and are cognitive of them. And the injustice may seem still greater when this doctrine is combined with the doctrine of "pure experience," which though not declared essential to pragmatism is in fact combined with it and seems at first sight to support it. According to it, ideas (including concepts) and percepts are of the same stuff. All of them are realities (a proposition which, as stated in so many words, I heartily accept), and they are at once conscious and real, conscious or mental merely in relation to other ideas, real in their other relations to those more intimately coherent and stable parts of experience which are percepts; so that the same thing is both thought of an object and object thought of, both in one, according to the rôle it plays.[1] I add therefore some remarks on these other features of pragmatism, much too briefly for the importance of the theory. The doctrine of pure experience (a form of realism as James rightly declares) appears to me incompatible with the doctrine of cognition which it seems to fortify. The question is, are ideas (*a*) merely substitutes for percepts, or (*b*) are they constituents of reality, or (*c*) both constituents of reality and substitutes for percepts?

On the theory of cognition, they are (*a*) substitutes for percepts. But if the notion of substitution is interpreted strictly, ideas do in this way become representations of reality and involve the difficulties of representationism, the false notion of knowledge which James is the first to repudiate. For ideas with him are not cognitive of their own reality, that is of the reality with which the idea is concerned, but of the reality which is given in perception. And to be consistent, since sensory experience is on one side of it related

[1] *Radical Empiricism*, p. 22.

to ideas, we should have in the end to go on and regard it as referring to some reality other than its own—the inexorable outcome of representationism. It is true that (as a part of the doctrine of pure experience) a distinction is drawn between ideas and percepts which appears to offer a solution of their difficulties.

This distinction is not always drawn in the same way. Sometimes (1) it is based on the ground of efficiency, the "energetic" character of the percept in contrast with the mere idea (or of course with the percept, considered as a mental state).[1] The real fire burns, but the ideal fire does not. The percept is energetic; not so the idea. Now this distinction is a different one from that which underlies the notion of ambulation from idea to percept. For if the percept is to gratify or fulfil the idea, that idea must be an idea about something, and what it is about is burning. The percept then adds to the idea what James elsewhere calls its sting or tang. Now this addition is intelligible if the idea is cognitive of its own object (that is the ideal burning); and experience shows that the ideal burning is continuous with and is succeeded by the real, vivid burning. But it is not intelligible if the idea is only a substitute for the percept, and is cognitive of the reality presented in that percept. If on the other hand we merely maintain that perceptual fire burns while ideal fire does not, we seem to be falling back upon that other criterion used by Locke in treating sensitive knowledge, that the percept makes all the difference to our weal and woe—a practical distinction in that very sense of practice which pragmatism disavows, and must not be taken to intend.

But (2) sometimes the distinction of idea and percept (or thought and thing) is taken differently.[2] The percept coheres stably with other percepts, ideas are relatively incoherent and unstable.[3] But we are now involved in other difficulties.

[1] *Radical Empiricism*, pp. 32-3. [2] *Ibid.*, pp. 21-2.

[3] It will be well for clearness to transcribe a page (*Radical Empiricism*, p. 124) in which both ideas appear to be contained. 'This "pen" for example is in the first instance a bald *that*, a datum, fact, phenomenon, content, or whatever other neutral or ambiguous name you may prefer to apply. I called it . . . a pure experience. To get classed as a physical pen or some one's percept of a pen, it must assume a *function*, and that can only happen in a more complicated world. So far as in that world it is a stable feature, holds ink, marks paper, and obeys the guidance of a hand, it is a physical pen. That is what we mean by being "physical" in a pen. So far as it is instable, on the contrary, coming and going with the movements of my eyes, altering with what I call my fancy, continuous with subsequent experiences of its "having been" (in the past tense) it is the percept of a pen in my mind. Those peculiarities are what we mean by being "conscious" in a pen.'

This seems to mean, not that the real fire burns and that the ideal fire does not, but that the really bright thing, the fire *also* burns, whereas the ideal bright thing does not. But the full idea of the fire is that of a bright thing which also burns. The idea of the pen is that of something which also holds ink. If this were not so, again how could the real experience gratify or disappoint the ideal one? It is true that ideas are incoherent as compared with percepts, but the idea of a coherent perceptual reality is as coherent as the perceptual reality. Thus this fresh distinction seems to depend on the distinction of efficiency already discussed, and like it either to conflict with the cognitive function assigned by the theory to ideas or to fall back on reference to our practical happiness.

On the other hand if (*b*) ideas are pieces of reality, and are actually constituents of it, then while it is clear that sensory experience cannot be the only reality (as the previous criticism seemed unjustly to suggest), yet neither can the idea be a substitute for it. Nowhere has the view that concepts are an integral part of the reality been expressed more drastically than by James himself.[1] But if this is the case, the reality must be conceptual in its constitution and the concept cannot be cognitive of the percept, for in reality the perceptual feature has to be added to the conceptual and it is something which the concept is not.

Thus while the notion of ideas as being of the same stuff with percepts might seem to remove the representationism of the theory of cognition with its notion of substitution, it is really incompatible with that notion. Now it is true that in fact ideas are (*c*) both constituents of reality and substitutes for percepts. But this requires a theory of cognition different from that of pragmatism. It requires that an idea should be cognitive not of something else (the percept) but of its own reality. The ideal reality could then be continuous with the perceptual and both would be alike ingredients of the whole. But this would mean not an analysis of pure experience into a unity with two aspects, but a recognition that it is essentially a dualism of subject and object in their togetherness. As it appears to my understanding of them, the theory of cognition essential to pragmatism and the metaphysical realism added to the doctrine are in contradiction.

If we try to separate out in pragmatism what is true and important as a theory of method, we seem to be left with what is not distinctive of pragmatism, namely, a notion of truth as coherence of all the data relevant to a given topic;

[1] *Some Problems of Philosophy*, p. 106—a vigorous statement of Platonism.

or else a modest statement of the difference between a mere idea and its complete reality. Beyond this we have a doctrine of truth which, for all its vividness and force, appears to have the defect of assigning an overweening importance to one element among others in the whole constitution of truth, and to be supported by a metaphysical doctrine of more than questionable soundness.

But one result has still to be stated which for me at least is a welcome one though it may sound offensive to a pragmatist. If truth means that which all may share, in which none may have a monopoly, pragmatism does, as it appears to me, fail in its account of this truth. I do not doubt that if the notion of pure experience can be maintained alongside of the theory of cognition, the attempt of James to demonstrate that many minds may know the same thing is perfectly successful.[1] That attempt, however, stands or falls with the notion of pure experience. But pragmatism does give a completely satisfactory account, and the only possible one, of what truth would be for what was called above (in section 6) the mere or solitary individual. For him the difference between the nature of truth and a secondary consequence of that nature, which can be used as a criterion of having attained truth, would not exist. This is indeed only to say that for him there would be no truth or reality at all, in the sense of the experience which we have of those things. He would have, as it was put before, no more than prudential truth. As in his practical experience, he would discover that certain acts of his were unwise, so in his beliefs he would find that there were beliefs which do not work, and which it is theoretically useful to abandon. The compulsion on him of the things he distinguishes from himself would take the form of menace to his intellectual success, I say nothing of his practical happiness. As in practice he would not know that it was right to be wise, so in speculation he would not know that to be correct was to have truth. He would only know that in the one case as in the other there was something in the nature of things which he disregarded at his cost. Pragmatism is not open to the charge that its truth is solipsistic. It gives no account of truth at all. But what it does account for, it accounts for completely. True the supposition of a solitary individual is thoroughly artificial and unreal. But to me it seems of value to realise how much of things, and in what form, is revealed to the individual alone, and how far it falls short of the truth or reality which is revealed to the collective will. Within the limited range of his experience, the recognition of

[1] See *Radical Empiricism*, Essay iv., with the references there given.

something in his world other than his casual beliefs, would serve the same purpose as our recognition of what is true for all, as distinct from the beliefs of the casual unit. But it would not be the same. His pragmatic truth would lack impersonality. It would be what worked for him; he only would profit by added experience, and if he perished by his mistakes, there would be no loss or gain to any one but himself.

II.—A SKETCH OF A PHILOSOPHY OF ORDER.

By J. S. Mackenzie.

1. Introductory Statement.

Recent discussions—more particularly those bearing upon the nature of Truth and Error and of Relations—have made it obvious that some apparently quite simple and fundamental notions need careful reconsideration. It is my object in this paper to indicate, in a brief and somewhat tentative fashion, a point of view that has at least proved helpful to myself in the effort to understand these apparently simple but in reality most difficult problems. The difficulty, I believe, is mainly that of seeing them in their right perspective. It is the misplacing of them that occasions most of the perplexity that has gathered round them. Hence it is not of much avail to deal with any one of them separately. Unless they are seen in their complex interconnexions, they are not really seen at all. It is, indeed, just here that the great difficulty in the study of philosophy lies. It hardly seems possible to deal with any of its problems without considering them all. As soon as we attack one the whole swarm is about our ears. Hence the fascination of such a system as that of Hegel, in which—once we have learned our way about in it—we seem at least to be able to place every question in an intelligible relation to every other. To know where and how the problems rise is to be half-way—unfortunately only half-way—towards their solution. But it is difficult to assure oneself that the Hegelian order is in all respects a sound one. Most of our British writers—even those who have been most profoundly influenced by him—have preferred not to follow his method in detail. Perhaps the tendency to approach philosophical problems in a more empirical fashion is too deeply engrained in our nature. Or is it only that no one is quite able to bend his bow? At any rate, most of us are impelled for the present to seek methods of our own in dealing with the questions of our time as they arise.

In a recent paper[1] on the problem of time, I sought to

[1] Mind for July, 1912. Reference may also be made to the article 'Eternity' in the *Encyclopædia of Religion and Ethics.*

urge that time is best understood when it is regarded as one among many Orders, having a permanent place within the comprehensive Order of the Cosmos. It is my object now to make some of the implications of this view a little clearer and more definite. This cannot be easily done without giving a sketch of what may almost be described as a system of philosophy, or at least as the indication of a philosophical method. The philosophy which I thus seek to sketch is not, I think, substantially different from that of other modern Idealists such as Hegel, Edward Caird and Dr. Bosanquet; but I seek to bring it more definitely into relation with recent discussions, and especially with the views of those who are commonly called Realists—who do not seem to me to be, in essence, any more realistic than those who are called Idealists. There is so much misunderstanding with regard to the idealistic position that it may be of some use to try to restate it in the way that I am here indicating, as a doctrine of Orders.

The method that I here adopt is certainly to some extent suggested by that of Hegel, though it has also something in common with that of Descartes, and has even some affinity with that of Locke. It is an attempt to begin with those aspects of experience that appear to be simplest and most immediate, and to allow oneself to be led on gradually, by the consideration of what is involved in them, to those that are more complex and recondite. A method of this kind is apt to strike one at first—as Locke's certainly does—as being essentially psychological; and no doubt it does tend to follow along lines that are largely similar to those of genetic psychology. But it is not really subjective. The essential error both of Descartes and of Locke lay, as I conceive, in the supposition that they were dealing simply with 'ideas in the mind'. If we bear constantly in view that what we are concerned with is an objective content, we may be able to secure the advantage of a genetic order without falling into the serious mistake of making psychology do duty for ontology. How this is to be done will, I trust, become apparent as we proceed. The first thing to be aimed at is to secure a starting-point; and here at least we can hardly do better than take Descartes as our guide.

2. The Starting-point.

When I ask myself what I really know, as distinguished from what I have opinions about, or what I have learned from hearsay, the first answer that occurs to me—as to Descartes—is that at least I know that I am, and that I have

certain experiences. Warned, however, by the failure of Descartes, I do not care to dwell much upon the bare fact that I am. Though it seems clear enough that in some sense I know that I am, yet it is equally apparent that if I try, after the manner of Hume, to catch myself at any particular moment, I find that I am catching at an empty shadow. When I say that I am, in this purely abstract way of speaking, I find on reflexion that I mean little more than that I have a certain awareness of a persistent focus to which the various particular facts of my experience are in some way referred; but the focus to which they are thus referred would appear to be little else than a meeting-point of experiences which, apart from the experiences that meet there, would be veritably nothing at all. The stage, as Hume puts it, is never apprehended except in so far as we apprehend the play that is being performed on it. However important, therefore, the Subject of our experience may be—and that is a point to which we shall have to refer later—it is at least somewhat hopeless to start with this as a simple and immediate datum. To know what it is, we must ascertain what it does. We must find out what is the part that it plays in relation to the objects that appear before it. Hence it may be best at the outset to set aside this somewhat problematical Self, and to attend rather to the particular experiences that are apprehended at this focus.

Now, as soon as I fix my attention upon these, I become aware of the important distinction between those that stand directly before me and those that are only indirectly suggested or implied; and it is apparent that only the former can in the fullest sense be said to be known. Yet the distinction is not one that it is at all easy to draw sharply. I see a red flower in front of me; I feel a slight pressure on my finger; I remember that I heard a knock a short time ago; I think I understand this sentence that I am now writing; and I try to consider what I am to say next. It is evident that there are various degrees of directness in the apprehensions that are here contained. Some of them appear to be presented to me in a simple and immediate way; others appear to involve something of the nature of judgment or inference or to contain a suggestion of something that is not directly before me. I have, for instance, only a very partial anticipation of what I am to say next, and yet I am not entirely unaware of the line of thought that I am seeking to develop. Even the meaning of the sentence that I am in the act of writing does not stand before me as the colour of the flower does, but is rather something that is partly constructed and

partly suggested or implied. Similarly, the knock that I remember has a reference to the past which is only very partially made explicit. Nay, even the colour that I see and the pressure that I feel are seen and felt as elements in a context that carries me out far beyond their individual being, and that is only very vaguely set before me. If, therefore, we are to get at that which is directly experienced, that with which we are in the fullest sense acquainted, we must try to concentrate our attention on something more immediate and simple. Can we find this in pure sense-data, uncontaminated by any objective reference or by any element of judgment or reasoning? These at least would seem to be the most hopeful aspects of experience for the purpose that we have at present in view. It is in this way that we are naturally led from the starting-point of Descartes to that of Locke, from the simple fact of consciousness to those objects of consciousness that appear to be the simplest, the original data that seem to come to us immediately through our senses. Let us try, then, to fix our attention for the present exclusively upon these—say, to begin with, upon the colour of the flower that stands immediately before me. Let us try to forget that it is a flower, which we know only by an act of judgment. Let us try to apprehend it merely as a speck of colour, and not even to think about it as that. Let us, in short, not in any way inquire *what* it is, but try to accept it passively as a mere undetermined *that*. Surely here at least we find something that is directly and indubitably apprehended. But now let us try to see what exactly it is that is thus apprehended.

3. Sense-data.

When we speak of sense-data as the simplest and most immediate elements in our experience, we have always to remember that it is only by an effort of abstraction that we can get at them at all—if, indeed, we can at all. If Hume was right in saying that I never can catch myself—and no doubt he was, in the sense in which he meant it—it is at least as obvious that I never can catch a pure sensation. An intense pain is probably the nearest that we can come to it; but even this is always some particular kind of pain, apprehended in some special way; and nearly always it involves a consciousness of self and of objects. In order to set before ourselves what would be meant by a pure sensation, it is necessary for us—if we may avail ourselves of another of Hume's illustrations—to imagine ourselves reduced below the level of an oyster. A pure sensation, in

short, is of the nature of what mathematicians sometimes describe as a limiting conception. It is an ideal of what we might reach if we could eliminate the 'what' from our experience, if we could reduce ourselves to the state of having nothing but a vague irritation, such as may perhaps belong to a jelly-fish. But no actual sense-datum in our human experience is a mere 'that'. It has always a quiddity as well as an entity. Still, it is no doubt true that a simple sense-experience, like that of the redness of a flower, comes as near as we can get to simplicity, immediacy, and passivity; and so serves as a good starting-point for the consideration of the way in which we are led beyond simple immediacy. Let us ask, then, what there is in the apprehension of such a simple datum that leads us out into the complexity of an objective system.

The first thing that I note here is that the identification of this particular colour involves the two aspects of identity and difference. It is *this* experience, and not any other. This does not imply, of course, that we need have any theory as to what is meant by identity; but the fact is there, of which any theory must take account. Now, this fact appears to me to be quite fundamental throughout the whole range of experience. The recognition of it has given rise to the statement of the so-called fundamental laws of thought, which, however, would seem to be not so much laws of thought as statements of a fundamental characteristic of all experience. Everything is, to begin with, itself, and not another; though the exact sense in which this is true, and the qualifications to which it is subject, may be matter for further consideration. But certainly even a simple sensation, if it is definitely apprehended at all, is apprehended as this, and not that. All experience, in short, has the aspect of *individuality*.

The recognition of a particular colour, however, involves more than this. It is apprehended not merely as *this* colour, but as a 'this' that may recur again and again. It has thus the aspect of *universality*. It is one of many possible instances of redness. As soon as this is recognised—and there seems to be some recognition of it even in very unreflective attitudes of mind—we have at least the germ of the apprehension of what is meant by one and many, and of the abiding in the midst of change. I get these aspects of experience, not indeed in a quite passive way, as Locke would appear to maintain, but by attending to the identity of this particular colour experience. The mere act of attending to it reveals these fundamental aspects. But now if, instead of attending specially to its identity, I consider rather its points of difference from other experiences, some other aspects, of an equally fundamental kind, immediately come to light.

A particular colour experience differs from other experiences in various distinguishable ways. It differs, for instance, from the pressure experience to which reference was previously made; and I do not find that I can explain in any way—setting aside, of course, the question of their origin—how these two sense-data differ. They are both sense-data, and they differ in this way from the meaning of a sentence or the anticipation of an action; but how they differ from each other it seems impossible to tell. I can only say that they differ in *kind;* and this is a mode of difference that I find constantly recurring throughout my experience.

But I find also that the experience of red differs from those of yellow, green and blue; and this difference does not appear to be in the same sense a difference of kind. The difference in this case can be to some extent made clear by arranging the colour qualities in a certain *order.* Here again a passage in Hume comes to our assistance—certainly one of the most extraordinary passages in his writings. After explaining his view that what he calls an 'idea' is always a reproduction of what he calls an 'impression' and challenging any one to produce an instance to the contrary, he meets his own challenge by calling attention to the continuity of the scale of colours, and by admitting that in this particular case it is possible that we may have a real 'anticipation of perception' (to use a Kantian phrase with a somewhat altered meaning). But he thinks this case so peculiar as to be hardly worth noticing. But surely it is simply an illustration of what we find in all genuine cases of difference of *quality,* as distinguished from differences of kind. Now, this species of difference also would seem to be contained in colours, sounds, smells and perhaps some of our other sense-data.[1]

But now, there is another variety of difference that is very similar to this, and that yet seems to be distinct from it—*viz.,* that kind of difference with reference to which Kant maintained that we were able to 'anticipate' sense-perception. If I move away from the flower, the colour of it, without necessarily altering its quality (though of course it may do this at the same time) tends to become less and less distinct. This is described as a difference of *intensity* or *degree;* and this also can be represented by means of places in an order, which, however, unlike those of quality, proceeds simply from zero upwards. This would seem to be a species of *quantity.*

Modern psychologists contend—and I believe rightly—that

[1] Pressure does not appear to contain such differences; and the difference between tastes, and between hot and cold would almost seem to be differences of kind.

besides this difference in pure intensity, it is possible also to detect other differences of a quantitative nature, which have been described by the terms *protensity* and *extensity*, both of which would seem to be varieties of continuous quantity.

The definite apprehension of these quantitative aspects leads very directly—in ways which it does not fall within my scope here to consider—to the recognition of modes of quantity that can be treated as discrete. Degrees of intensity can be counted, and so lead to the definite recognition of the order of *number*;[1] while, in the case of protensity and extensity, reflective analysis discovers the orders of *time* and *space*.

Now, it is of course true that, in bringing out these various aspects that are involved in a simple colour experience, I am forming definite judgments, and so going beyond the direct experience of sensa-data as such. But I am, at any rate, going beyond them under the direct guidance of experience itself. If I have an art that adds to nature, it is 'an art that nature makes'. These orders within which the facts of experience fall are implicit in the very simplest experience that comes to me; and I cannot really *know* that experience except in so far as I make them explicit. This fact tends, I think, to throw some doubt on the sharp distinction that is drawn by Mr. Russell between simple sense-data and the relations between them. His distinction between acquaintance and description seems to me to have a similar defect. Pure acquaintance could hardly be called knowledge at all, and it may be doubted whether it is ever to be found undiluted in our human experience. But I hope the significance of this will become more apparent as I proceed.

4. Fundamental Orders.

A good deal of what has been so far stated will, I suppose, be pretty generally accepted. But I have thought it well to set it forth explicitly, in order to make quite clear what I am now seeking to maintain—*viz.*, that there are certain fundamental orders involved in the content that is set before us even in our simplest and most immediate experiences of the world.

[1] To prevent possible misconception, it may be well to state here that, in referring to number as an order, the numbers that I have primarily in view are what are called the Cardinal Numbers. I doubt whether, properly speaking, there are any other numbers. What are called Ordinal Numbers seem to me to arise from a combination of the numerical and the temporal order. Things that have no discoverable natural order —such as the letters of the alphabet—can be given an artificial order by being taken one after the other; and then numbers may be attached to them. But this is one of many details which cannot be satisfactorily dealt with in such a paper as this.

To say this is, first of all, to reject the atomism of Hume; and in that rejection both our psychologists and our philosophers are in the main agreed. But it is also to reject the method that Kant adopted for the refutation of Hume, with all its cumbrous machinery and with all the perplexities to which it leads. Here also most of our modern philosophers are to some extent in agreement; but the rejection of the Kantian method has, I think, been in general much too half-hearted. It must be reformed altogether. It is no doubt true that the defects in the Kantian system were to a considerable extent corrected by himself, and that he suggested the means by which this correction might be carried farther; but I believe it is now very important that it should be carried out to the fullest extent. I admire the work of Kant, I hope, as much as any. I admit its great value as a sort of scaffolding for the erection of a sounder philosophy; but I think it is quite time that the scaffolding should be taken down. Kant was right, I believe, in urging against Hume that modes of unity—modes of *order*, as I prefer to say—have to be recognised in the constitution of our world; and he brought out with great force the part played by some of them in that constitution; but beyond this it hardly seems possible to go with him. The modes of unity are not something foreign to the material which they build up, but are rather contained in it from the very beginning. Hence we need no elaborate apparatus to account for them. We need no forms of sense. We need no constructive activity of the understanding. To use one of Kant's own antithesis—we need no *synthesis*, but only a *synopsis*. We need only to look and see what is contained in the material that comes before us.

What I seek to maintain, then, is that even our simplest apprehension is at least implicitly the apprehension of an order. Genetic Psychology renders no doubt a valuable service in helping us to trace the steps by which what is thus implicit becomes explicit; but for the metaphysician the really important point is not the history of its growth, but the fact that it is there from the outset.

Kant made use of an elaborate machinery, with almost innumerable distinctions and antitheses—forms of sense, categories, schemata, ideas, and so forth. I believe that these bewildering distinctions are in the main due to the false start that he made—a false start that results, as we might say, from an imperfect recognition of the untenableness of the atomism of Hume from which he sets out. When we recognise that atomism is untrue from the outset, we recognise

that order is involved in our experience all the way through. The term 'order' seems to me on the whole the most satisfactory that we can use to cover all the modes of unity that are contained in our experience. It appears to me to be less misleading than such terms as 'unity,' 'system,' 'form,' and the like; and I believe that it may be fittingly used for most of those aspects of experience to which these other terms have been applied. No doubt there is a good deal of difference between different types of order. Such orders as those of intensity, quality, number, time, space, are in many respects sharply contrasted; and there are some others, to which attention has not yet been directed, which are markedly different from any of these. But they are all alike as being the modes in which the plurality of the content of our experience reveals itself as being at the same time a unity.

It was the object of the preceding section to indicate the way in which such orders are involved in a simple experience like that of colour. The colour no doubt may be said to present itself at first as a simple 'that'; but further attention to it shows that the 'that' is simply, in mathematical language, the point of intersection of a variety of orders. A colour that is now experienced by me has a place in the time order of my experiences, in the order of colour qualities, in the order of intensities; it is numerically one, and has thus a place in the order of numbers; and it has also a spatial position. When these and other orders to which it may be found to belong have been fully ascertained, it seems to me that its being is thereby exhausted, and that there is nothing further to be said about it.[1] The only qualification that may appear to have to be made on this is, that this particular colour belongs to a certain kind—*viz.*, the kind called colour —and that kinds can hardly be said to form an order. This is a point to which I intend to refer later. In the meantime I admit that it is a possible objection at least to the use of the term 'order' to cover all the systems within which such an experience lies. But before referring further to such points as this, it may be well to try to make my general meaning clearer by bringing this conception of order into close connexion with some other cognate conceptions.

5. Orders and Relations.

One of the chief advantages of such a conception of order as I have been trying to indicate, is that it seems to enable

[1] This implies, I think, the rejection of the independent reality of 'substances'. It involves the acceptance of the view of Spinoza that the only substance is the Cosmos; though of course it does not involve his particular theory of the Cosmos.

us to deal effectively with the vexed problem of relations. Prof. Alexander has done well in calling attention to the valuable service that was rendered by William James in bringing out the fact that relations are not to be thought of as if they were something of a distinct species to be added on to the things between which they hold. He perceived 'that space-relations at any rate were homogeneous with the terms between which they mediated'. It is no doubt true, as James urged, that Green's way of speaking about relations was misleading, owing to the extent to which it was coloured by the doctrines of Kant. Relations, I would urge, simply express the position of particular objects in the order or orders to which they belong. The statement that $A > B$ is a way of indicating the positions of A and B within the quantitative order, just as the statement that A is to the north of B indicates their position within the spatial order, and the statement that A is before B indicates their position in the temporal order. The many puzzles that have been raised about relations seem to me to disappear almost entirely when this is fully realised.

Among other things, we are able, I believe, from this point of view, to see the significance of the distinction that has been drawn between those relations that are intrinsic and those that are extrinsic. When we are dealing simply with some one definite order, the relations that determine the position of a point within that order may be called intrinsic. That $7 > 5$, that black is darker than grey, that the middle point in a movement comes before the end point—the relations expressed in these statements are intrinsic, *i.e.*, they are involved in the constitution of the order to which they belong. On the other hand, when we consider objects that have a determinate place in some one order, and try to ascertain their position with respect to some other order, the relations with which we are then concerned are extrinsic. That a particular colour quality—*e.g.* red—presents itself at a particular time or place, is a fact that is extrinsic to the nature of the order to which it primarily belongs. It is really, as it seems to me, on considerations of this kind that the old logical distinctions between difference, property, and accident, essentially depend. The differentia of a quality—*e.g.* red—would be that which determines its place in the scale of qualities of that kind—*i.e.* in the scale of colours; its properties would be any determinations that follow from its position in that scale; while any determinations that had to do with its place in some other order, would be, from this point of view, its accidents.

Now, I expect that many will be inclined to think that this way of stating the matter involves an inversion of the proper order—that, instead of saying that relations are to be explained by orders, we ought rather to say that orders are to be explained by relations. This seems to me to be just where the crucial point lies. The view that we take here will determine, in the end, whether we are to be pluralists or believers in a real universe. The problem may be illustrated by reference to a special case. Take, for instance, the colour green. This is more or less like the colour blue. It is certainly more like blue than red. Are we to say that we first apprehend the special colours, then these relations between them, and that we then arrange them in a certain order in consequence of these relations? Or ought we to say rather that they belong to a certain order, and that we discover their relations within that order? Now, I admit that, if we are considering simply the process of discovery, the former is the more natural way of putting it. It is no doubt true that people are familiar with such colours as red, green and blue, and notice degrees of likeness between them, long before they have any thought of arranging them on a qualitative scale. So also they may have learned about some events and their dates before they have any definite thought of temporal order; and they may know something about numbers and their relations before they have any definite conception of the numerical series as a whole. But in the cases of time and number it seems pretty evident that the nature of the order is presupposed in the particular relations that are discovered; and I think this is really true in the case of colour also. The degree of likeness that we discover in colours means their degree of nearness or distance from one another in a certain order; just as degrees of intensity mean distance from zero. This, at any rate, is the view for which I am here contending. No doubt its establishment would call for more discussion than I am able here to give it.

6. Order and Form.

From the point of view that has now been indicated, it is possible to reconsider also the distinction that has so frequently been drawn between matter and form, and to indicate both its value and its danger. This antithesis has played a dominating part in many systems of philosophy, both ancient and modern; and it is of course one that very naturally arises and is easily applied. Any datum may be regarded as matter—*e.g.* a set of colour qualities, red, green, blue, etc. The order within which it falls—*e.g.* the scale of colours or

the scale of intensities—may then be described as its form. It seems clear, however, when the antithesis is thus regarded, that the two aspects are not really separable. There is no matter without form, and no form that is not the form of some matter. By an effort of abstraction, however, the two aspects may be considered apart. Pure matter then comes to be thought of as the mere indeterminate 'that,' waiting, as it were, to have its form assigned; and pure form is thought of as an order within which nothing falls. The former is mere negativity or nonentity, and does not seem to have any value at all, except as a limiting conception. Forms, however, can be considered, and it is sometimes profitable to consider them, without any explicit reference to their particular content. We can consider intensity, for instance, without inquiring whether it is the intensity of a sound, a colour, or a pressure. Similarly, we can consider time without reference to any particular changes that occur in it, and spatial or numerical order without reference to any particular things that stand side by side or that can be counted. Mathematics is the science that most definitely deals with such forms; and it is obviously capable of arriving at valuable results, so long as it remembers that its treatment is purely formal. If it forgets this, and supposes that it is dealing with actual orders, it may lead us into serious error.

Now, this is just the danger that constantly lurks in the treatment of pure form; and philosophy has at various times suffered very much from the attempt to transfer directly statements that may be made about pure form to the treatment of concrete reality. Perhaps the most conspicuous instance of such a transference is to be seen in the mathematical conception of infinity or endlessness. Forms naturally give rise to this conception. Number and space, for instance, are endless; that is, there is nothing in the nature of these forms, as such, that could impose a limit at any point. It does not, however, follow that any real order—*i.e.*, any assignable content to which these forms apply—has the same characteristic. Number is certainly without limit; but it is equally certain that there is some definite limit to the number of individual things—grains of sand, midges, planets, etc., in the world at any particular time; and I cannot believe that they will ever become infinite.[1] I believe that Parmenides was right in thinking that no concrete thing can be sup-

[1] This term is of course here used in its strictly quantitative sense, as distinguished from that more purely qualitative one in which it means *perfect* or *complete*.

posed to be endless. Limitations are constantly being discovered in things that were once supposed to be boundless. The qualitative differences in colours, for instance, that can actually be apprehended, are limited, and can be counted. Physicists again—such as Lord Kelvin—have urged that the material universe must be thought of as a limited system; and certainly it seems to me that no other view is conceivable. Empty forms are endless, but concrete orders have their definite boundaries.

In almost all ages philosophy has had to struggle against the predominance of the mathematical or formal point of view. The influence of formal conceptions is of course seen most conspicuously in such a philosophy as that of the Pythagoreans, who took the conception of the simply boundless as their starting-point, and who conceived of this as being limited by determinations of a purely formal kind. They were thus led to a purely mathematical view of the universe—a view that was practically reproduced, so far as the material universe is concerned, by the modern Cartesians. A different view of form was of course taken by Plato; but he also tended to think of forms as self-subsistent and independent of any particular content: and in his treatment of the material world he seems practically to identify himself with the Pythagoreans. It is somewhat startling to find that Prof. Alexander apparently gives his approval to this procedure. On the other hand, in some of his later writings—especially the *Parmenides* and the *Sophist*—Plato seems to be more fully aware of the unsatisfactoriness of such a formal view, and to be advancing to a conception more like that which I am aiming at by the term 'order'. Aristotle made a more decided move in the same direction, by urging that form has no reality apart from matter. But the abstract way in which he conceived of these two aspects prevented him from really connecting them, and the antithesis of matter and form remained as the crux of his philosophy. Hence it is not to be wondered at that, on the logical side at least, his doctrine was eventually turned into a pure formalism. Formal Logic is an attempt to deal with the pure forms that are used in thinking about objects, without reference to the special types of structure within which these objects are contained. What is called the Logic of Relatives is largely an attempt to correct this; but I think its meaning would be made clearer if it were regarded rather as a Logic of Orders. What I mean by this was partly indicated above. What I am at present emphasising is the way in which the conception of pure form has affected philosophy. It is hardly necessary to refer

again to Kant. He made many vigorous protests against the introduction of mathematical methods into philosophy; but, in spite of all his efforts, he was himself hopelessly entangled in the meshes of formalism. He got his categories from the purely formal conception of judgment; and, in dealing with the world of objects, he practically eliminates quality and even reduces degree to number. How a similarly formal conception infects his Ethics we need not here do more than hint at.

Closely connected with the conception of Form is that of Universality. Indeed, both with Plato and with Kant, the two conceptions tend to become identified. Such an identification is natural. When the form is separated from all particular content, it is thought of as a universal determination that may be applied to an indefinite number of things. Yet the identification of the formal with the universal is confusing. Space and time, as Kant noted, have to be thought of as forms, and yet they are individual. On the other hand, red is not formal, and yet is a universal determination. Here again it seems to me that the conception of order helps us out of a difficulty. An order is essentially an individual whole; but any point in an order is universal, in the sense that an indefinite number of objects may meet at it. The colour scale is one; but red, blue, green, etc., are universals. Relations also, which may hold within an order—such as likeness—may be described as universals, and many of Plato's universals are of this sort. This is an inportant consideration; but I cannot dwell upon it further here.

The objections that have in recent times been urged against what is commonly called 'Intellectualism' seem to me to owe such force as they possess to the unsatisfactoriness of theories that deal with what is merely formal. When Mr. Bradley referred in a famous passage to the 'unearthly ballet of bloodless categories,' he was thinking of them, I suppose, as simply formal; and this is of course justified, as I have already noted, by the way in which they were conceived by Kant. Order, however, is not really bloodless. There are full-blooded orders, as well as thinner ones. But Kant no doubt failed to realise this. His philosophy was essentially an attempt to reinstate order and unity as against the chaotic pluralism of Hume. But his distinction between the forms of sense and the categories of the understanding prevented him from giving any real unity to the orders with which he had to deal. His so-called 'Copernican revolution' also (which, as has been pointed out, was not really Copernican at all, but rather the reverse) prevented him from seeing the

significance of his orders. He thought of them as imposed externally on the material that is presented, and so as a form contrasted with the matter to which they are applied. It is such formalism that is the source of the kind of 'Intellectualism' that is rightly criticised. But it is surely a mistake to suppose that an intellectual or conceptual view of things is necessarily formal. This I must try to bring out a little more definitely.

Before passing to this, however, I may just note at this point some other terms that are sometimes used, besides 'form,' to characterise the orderly aspect of experience. 'System' and 'unity' are two of these. The former has a defect similar to that which is inherent in 'relation,' in close connexion with which it is frequently used. It tends to suggest that the whole is essentially *subsequent* to the parts; and this often tends to mean that it is a construction of the mind superposed upon some original data. 'Unity,' on the other hand, is misleading from its numerical implication. A real order has plurality as well as unity. The term 'organic unity' is sometimes used and is sometimes useful; but it is specially suited for the characterisation of one particular kind of order—*viz.* one that is teleological. This kind of order will be referred to in the sequel. In the meantime I am only trying to make clear what I mean by an 'order,' and why I call it by that name, by indicating the misleading associations that cling round the alternative designations.[1]

7. Orders and Concepts.

The consideration of the presence of orders, relations, forms, universals, unities or systems—however we choose to name them—in the content of our experience, leads to the recognition of the importance of the conceptual side of our apprehension of objects. Much of the criticism that has lately been directed against Intellectualism—now almost a term of abuse among philosophers!—relates to the use of concepts. We are urged in various ways, and by various people, to subordinate the conceptual aspect of the perceptual, or to feeling or intuition. As I have already noted, the objection to the conceptual aspect seems to be largely based on the view that conceptual apprehension is purely formal. I cannot admit any real antithesis between the perceptual and the conceptual; though of course I recognise stages of development. Kant, who was

[1] The conception of Order has also the advantage of connecting itself immediately with that of Direction (*Richtung*), which has been so well emphasised by Dr. Goldscheid and others. But to this I cannot do more than allude here.

one of the first to emphasise the contrast, did much to break it down. All through our experience, as I have been urging, we are apprehending orders. The difference between the conceptual and the perceptual level of intelligence seems to lie merely in the fact that in the former special attention is directed to the orders that are there implicitly from the first. The psychological processes by which this advance takes place are interesting, but do not specially concern us here.[1] It is enough to note that it is in judging and reasoning that the recognition of the conceptual element in knowledge becomes explicit; and certainly these processes demand some attention at this point.

8. Order and Judgment.

A judgment may be most simply regarded as an answer to the question 'What is that?' It answers this question by definitely placing the 'that' within some recognised order. Kant described it as a reference to the synthetic unity of apperception; and others have stated that it is essentially a reference to reality. In a sense this seems to be true; but, in using such expressions, it should be remembered that the unity or reality to which we refer may be only a limited order. The judgment that $2+2=4$ has no explicit reference beyond the numerical order; nor does the judgment that green is more like blue than red carry us beyond the order of colour qualities. No doubt these orders may be regarded as included within some more comprehensive order; but in a simple judgment of fact no such reference need be explicitly made. This consideration is of some importance when we inquire what is meant by truth and error, which is the question that we must next briefly raise, and to which we may at once proceed.

9. Truth and Error.

The orders to which we have so far been referring are, it must always be remembered, objective orders. The objects that we apprehend form a real order, and in judging we are seeking to state some of the relations that are involved in this order. In so far as we do so, the judgments at which we arrive (and which we commonly express in the form of propositions) are true. In the act of judging, however, we are selecting and arranging things on grounds that may not be relevant to the objective structure of the system. If,

[1] The recognition of what are called 'Gestalt-qualitäten' by some modern psychologists seems to me to indicate an important advance.

for instance, I think that seven is a perfect number, I may have some real ground for thinking so; but the ground does not lie in the nature of the numerical order. Perfection belongs not to the numerical order, but to the order of value; and it would have to be tested by reference to that order. The fact, on the other hand, that $7 + 5 = 12$ does so lie. This judgment is true of the numerical order. It expresses a relation which is involved in the structure of that order. The other judgment may very well be false; but, at any rate, it cannot be tested by reference to the numerical order. On the other hand, it may easily be shown, by reference to that order, that the judgment that $7 + 5 = 13$ is false.

Looking at the matter in this way, I think it is clear that it is untrue to say that no limited judgment is completely true. A judgment that relates to any particular order is completely true if it is the statement of a relation that is involved in the structure of that order. In saying this, I believe I am in harmony with the view of Prof. Stout, whose essay on Error seems to me to be a very valuable contribution to the discussion of this subject.

I think it well here to refer to a somewhat important distinction that seems to me to be often overlooked in this connexion, and that has caused some confusion. The sense in which judgment is dealt with in Logic is rather different from that in which it is dealt with in Psychology, where it is more properly called 'belief'. A judgment, in the logical sense, is either true or false. Error, properly speaking, is rather a psychological fact, and admits of degrees. It means the acceptance of a false judgment as if it were true. Judgments are true or false; beliefs ought rather to be said to be more or less correct or erroneous. The otherwise admirable discussions about truth in Mr. Russell's *Philosophical Essays* seem to me to be somewhat vitiated by the failure to emphasise this distinction. The recognition of it, however, calls attention to the subjective aspect of judging, to which we shall have to recur shortly.

10. Order and Reasoning.

The statement of a relation within an order is dependent on the general nature of the order within which it falls. Hence in determining the truth of a judgment we have to test it by a reference to that order. This is, I think, what is properly to be understood by reasoning. The general nature of the order—at least when it is one of those orders that are involved in our immediate experience—is, I think, rightly said to be apprehended by intuition. We cannot go behind

this mode of apprehension unless it is possible to arrange these fundamental orders in some more comprehensive order. Such an arrangement as that supplied by means of the Hegelian dialectic would yield a means of going beyond the subsidiary orders; but this I am not at present prepared to consider. Apart from this, we have simply to take each fundamental order as it stands. The general nature of an order can sometimes at least be expressed by means of certain simple judgments, which are commonly called axioms; and these may be regarded as the ultimate foundations of our reasoning. Thus, $12 > 7$, $7 > 5$, $\therefore 12 > 5$, is a reasoning; and it may be said to depend on the general axiom of quantity, that what is greater than the greater of two magnitudes is also greater than the less. But it may be doubted whether much is gained by the statement of such axioms, which only put into words what is obvious from the direct apprehension of the quantitative order.

11. Reason and Cause.

There are, however, relations with reference to which we are led to form judgments without being able to see the precise order within which the relations fall. In such cases our grounds are more or less hypothetical or empirical. The most important of such cases are those that are usually indicated by the term 'causation'. When we can discover a fundamental order, the 'formal cause' is sufficient; and we do not usually describe this as cause at all. Just as it is unusual to 'expostulate,'

'Why day is day, night night, and time is time,'

so we do not commonly inquire why red is red or four is four or loud is loud, or anything else that belongs to the structure of such fundamental orders. But when we find that boiling a lobster changes its colour, that touching the fire gives us pain, that a cat when it is gently stroked purrs, that the mixing of oxygen and hydrogen in certain proportions produces water, or that a stone when unsupported falls to the ground; we are not aware of any self-evident order within which such occurrences can be placed. It would not, on the face of it, be at all surprising if the results were quite different. They are magical occurrences, like the appearance of a Djinn on the rubbing of a lamp; and at first human beings tend to think of things of this sort as purely casual. But experience leads us gradually to recognise that there is an order in such apparently casual incidents, though it is not an order that is obvious. Sometimes what seemed casual is seen afterwards to be a case of

very simple order, as when change of place can be traced back through a continuous movement. Reflexion on such cases leads us to form the general hypothesis that in all cases there is a definite causal order, if only we could discover it. How far we are justified in forming such a hypothesis, we shall have to consider briefly at a later point.

12. Subjective and Objective Order.

The orders so far referred to have been described throughout as objective. An antithesis is here implied to an order that may be characterised as subjective. In apprehending the orders of time, space, number, etc., we are not only aware of them, but are also aware that they are apprehended; and we are aware of the apprehending of them as being itself an order. It is here that the *cogito ergo sum* of Descartes is in place; but it does not appear to be true that the consciousness of the apprehending is any more certain than that of the objects that are apprehended. This order, however, is very distinctly known, and can easily be contrasted with the other orders, though of course it intersects them, just as they intersect each other. Its antithesis to them becomes especially marked in cases of error. When we judge incorrectly, or make an unreal abstraction, or set up an unjustifiable hypothesis, we are not following the objective order, but constructing an order of our own. This order is nearly always determined to some extent by the objective order, but it is also guided by a certain process of individual selection, of which we are more or less definitely aware. This is an aspect of our experience of which we must now take some account.

13. The Order of Value.

In referring to judgment and reasoning and to the nature of truth and error, it has been necessary for us to take some note of the aspect of selection as involved in our apprehension of the world; but it is now time to indicate this aspect more definitely. In judging and reasoning we are not simply apprehending objects. We begin by apprehending a more or less undetermined 'that,' which we then proceed to place within an order that we apprehend in a general or schematic way. In judging and reasoning we are making the order and the particular content that falls within it more definite. Now, in the judgments that we form with reference to the objective content that is set before us, we are determined, as far as possible, by the object that is immediately apprehended and by the structure of the order or orders within which it falls. But our apprehension of the objects and their orders is always

more or less incomplete; and hence the orders as we apprehend them are not quite coincident with the objective orders. We are constantly outrunning what is definitely apprehended, and in doing this we are selecting or ordering in a way that depends on the structure of our subjective order rather than upon that of the objective orders that we are partially apprehending. There is thus an element of individual choice in our knowledge, and it is this that we have now more particularly to notice.

In considering this, we are led to see a certain order of value or worth which is involved in all our conscious experience. I apprehend pain or bitterness, for instance, and I may try to determine their place among the other objects that are set before me. But I not only apprehend them. I dislike them, and this is a subjective attitude. I treat them as having a negative value, and this may be expressed in a definite judgment. Now such judgments, like others, seem to start from a vague apprehension, and to proceed gradually to make it more determinate.

The simplest form of such an apprehension would appear to be contained in that experience of pleasantness or unpleasantness which we can nearly always detect as an accompaniment of even our most rudimentary sensations. But in this attitude of liking and disliking there is no definite judgment. Still less are we able to assign any ground for the attitude that we take up. When we seek for some definite ground in such cases, what we generally find is some ground of an objective nature connected with the condition of our bodily organism. What appears pleasant is generally found to be in some way dependent on the healthy functioning of the organism as a whole or of some particular part of it; while what appears unpleasant is dependent on some failure or obstruction. The choice in such cases would seem to be the choice of our organism rather than of the conscious self. The conscious self, so to speak, only receives and endorses the verdict of the body.

But from this kind of unconscious selection there is a gradual advance to choice that is more purely our own. It is not possible here to do more than point out very briefly the general nature of this advance, by which the meaning of good and evil is progressively unfolded. The essential thing for our present purpose is that we have to recognise a development from the stage at which the reference is to the bodily organism to that at which it is rather to the conscious or personal self; and then from that to the stage at which the reference is to a super-personal order within which the con-

scious self is contained. These stages are of course not very sharply separated off from one another.

It would seem that at first choice is hardly distinguishable from liking, and that liking is immediately aroused by the presentation of particular objects, and is unconscious of any ground. This unconscious attitude may persist even at a highly developed level of conscious life. It is expressed in the familiar lines about Dr. Fell; and it would seem that, in general, even the apprehension of the beautiful is unconscious of the grounds upon which the liking rests. But the consciousness of a desirable end gradually disentangles itself from the vague fact of liking; and this desirable end is apt to present itself primarily as the thought of a good for the individual self. But the consciousness of self acquires definiteness only in close conjunction with the consciousness of other selves; and the recognition of this conjunction leads gradually to the substitution of a super-personal unity—such as is found in the family, the tribe, the State, the human race, etc.—for the merely individual self. Good, which may at first be taken to mean anything that happens to be liked, thus comes gradually to mean rather what has the highest value in a super-personal order. It is chiefly in connexion with such an order that we formulate what are commonly called 'ideals'. But before we notice the nature of the ideal, it seems necessary to make a short statement about the distinction between the actual and the possible, which acquires a special significance at this point.

14. The Actual and the Possible.

The subjective order sets before us an arrangement of the world which we contrast as unreal with the objective order that we are gradually apprehending; and this antithesis becomes specially marked as the order of value comes out into prominence. From the point of view of value, we pass judgment on the world of fact, and decide that there are many things in it which are not as we would like them to be, or as they ought to be. We may even take up the position of Mephistopheles, and think that

> Alles, was entsteht
> Ist werth, dass es zu Grunde geht.

If only we had enough control over the objective system, we would perhaps, like Omar Khayyam,

> Shatter it to bits, and then
> Remould it nearer to the heart's desire.

But this leads us to another point. We find that the world of fact, as it presents itself to us from time to time,

not only contains the aspect of change in itself, but is subject to modification in accordance with our choice. What I dislike has a certain tendency to be rejected, what I like to be retained and developed. Bodily movements take place in a certain regular order, leading to changes that can to a considerable extent be anticipated in the world around me. Thus we are able to regard what we *wish to be* as something that *may* be; and it is this that gives a special significance for us to the setting up of the possible against the actual.[1] In other words, we find that the order of value is capable of entering into relation with the causal order, and thus of giving rise to the fact which is commonly expressed by the term 'conscious activity'. Further, we find grounds for believing that such activity is exercised by other beings as well as ourselves; and the consideration of the world around us—especially the facts of life and growth—suggests to us at least the possibility that there may be a general line of progress in a direction that corresponds on the whole to the order of value. It is chiefly from this point of view that ideals acquire practical significance for us; and the recognition of this point of view may now enable us to consider the nature of the ideal a little more definitely.

15. The Ideal Order.

The application of the order of value to the content of our experience leads us inevitably in the end to the conception of an absolute ideal in which the Good is fully achieved. To consider precisely how such an ideal is to be thought of, would involve a more thorough inquiry into the conception of Good than can here be attempted. But it would seem at least to imply a complete order of orders—*i.e.* the view that all the orders involved in the structure of the Universe are capable of being regarded as a complete system in subordination to the Good. This appears to be the view that was most definitely put forward by Socrates or Plato, following the saying of Anaxagoras, that all things were in disorder till Nous came and arranged them. Anaxagoras was blamed by his followers for not perceiving that Nous implies choice, and that this implies value or good. On the other hand, as

[1] Kant treated the possible as that which is in conformity with the general conditions of space and time and with the formal 'laws of thought'. It seems truer to say that it means that which is in conformity with any order that is at the moment relevant. Dr. Meinong's 'Annahmen' are, I should think, a particular case of possibilities in this sense. From the point of view of the Cosmos, it would seem that only the actual can be possible; but many other things are possible from the point of view of subsidiary orders.

I have previously indicated, it is doubtful whether the followers of Anaxagoras fully appreciated the conception of Order which he suggested.[1] It seems clear that, if the Universe is really to be interpreted in the light of Nous, all the subsidiary orders must have a place in relation to the Good. Thus, for example, since time is one of the orders, it would seem that the complete ordering of the Universe could only be reached through a time-process. On the other hand, since there is a subjective order, the completion of which involves the apprehension of the whole process as an order, it would seem that the achievement of the Good would have to involve the absolute value of the process that leads up to it. The only way, therefore, of thinking of an ideal order is to regard it as a perfect whole which is progressively unfolded.

16. The Validity of the Ideal.

Such an ideal as that which has now been indicated, though perhaps most explicitly set forth by Plato and by Hegel, is more or less definitely implied in nearly all the constructive systems of philosophy. At any rate, it is what is implied in any system that can properly be called idealistic. But the question has now to be asked, how far such a conception of an ideal order can be accepted as valid. Certainly it is not altogether easy to establish its validity. The problem is essentially that which has been commonly described as the proof of the being of God, or of the Absolute. Now, from the point of view that is here adopted, it must be admitted that there is great difficulty in any such proof. Proof, in general, seems to depend on the establishment of certain relations within a recognised order—*e.g.* number, space, time, etc. If the orders themselves are called in question, it is hard to see what proof could be offered. No sane man doubts the reality—in some sense of that word—of such orders as those of number, time, or value. There may be doubt as to the exact nature of the content that can be placed within these orders, but hardly as to the existence of the orders themselves. The causal order is perhaps not quite as self-evident; but at least the growth of our experience leads to an ever-increasing confidence in it. Now, it may be urged that something very similar may be said about the conception of a comprehensive order. It is certainly not easy for any one to doubt that the world of our experience may be described as a Universe; and, the more our knowledge grows, the more

[1] Of course, Anaxagoras was not the first who called attention to the idea of order. The part that it played in early Greek speculation is well brought out in Mr. Cornford's book, *From Religion to Philosophy.*

difficult does it seem to become. For, not only does the growth of our experience make it more and more apparent to us that the facts that we apprehend fall into certain definite orders, but it also becomes more and more apparent that these orders have a certain *Κοινωνία*—to use a Platonic expression—that, in other words, they intersect one another, and have many interrelations. Now, it is difficult to make this intelligible without regarding them as being placed within a more comprehensive order—however much it may be admitted that attempts, like that of Hegel, to set forth the structure of such an order, are not altogether convincing. Now, if it be admitted that there is a real Universe—*i.e.*, if such a scepticism as that of Gorgias is set aside—it would certainly not be easy to form any conception of such a Universe except as a perfect whole, more or less of the kind that has already been characterised. This seems to me to be the only kind of proof of which such a hypothesis is susceptible, unless the place of the subsidiary orders could be definitely determined as falling within a larger whole.

What have we to set against such a contention? It may of course be urged, and it has been urged—perhaps most strikingly by Dr. McTaggart—that we do find grounds for the rejection of any such view of the perfection of the whole in the apparent incompleteness of the orders that we know. If the Universe is a perfect order, how comes it, it may be asked, that any imperfection appears in the subsidiary orders that fall within it? Now, it seems clear enough that we do find such imperfection. Kinds, for instance, hardly seem to form a definite order at all, and even qualities are limited in ways that appear quite arbitrary. Still more serious is the antagonism that we seem to discover between the order of value and the order of experience in the human consciousness. It is here chiefly that what is called the problem of evil presents itself, which perhaps it may be admitted that no one has, in any complete sense, solved. But it would at least be rash to pronounce it to be insoluble. In particular, it hardly seems to be a valid argument, that the existence of any element of evil in the world as we know it is a proof of the imperfection of the order of the Universe. It is no doubt true that some form of Manichæism is what our ordinary experience suggests. We can hardly help feeling that in a perfect universe we should not expect to find so much meanness and squalor, so much pain, so much hopelessness, and positive deterioration, as we constantly observe in the world around us and sometimes experience within ourselves. As Cardinal Newman said, it 'is a vision to dizzy and appal; and

inflicts upon the mind the sense of a profound mystery'. But, on the other hand, it must surely be recognised that the perfection of the whole may very well imply imperfection in the parts, so long at least as their separate existence is maintained. It is hard to see how it could be otherwise, if there is to be any distinction of part and whole at all; and how there could be an ordered Universe without this, has not, I think, been anywhere explained. It may be urged further that good seems to imply evil as its necessary counterpart, and to be meaningless without that counterpart. The Hegelian conceptions of negativity, of the 'other,' of what has been described as the 'dissociation of the Absolute,' taken along with the thought of a possible recovery through growth, seem to be of the utmost assistance in dealing with this fundamental difficulty. It may be urged further that good, being essentially an object of choice, could not really be achieved at all, unless its achievement could somehow be viewed as brought about by the choice of intelligent beings. There could not, it may be urged, be any paradise for man which he does not in some way win for himself. The conception of an ideal order seems to be essentially that of a perfect self meeting a perfect world. The former aspect at least seems to imply development, and this seems to involve temporary imperfection. If there is real growth, the imperfection must of course be one that is being gradually overcome. Now, experience does seem, to some extent, to justify a belief of this kind. Choice, we find, is causal. It seems possible gradually to realise what is good by acts of choice; and we can hardly set any definite limits to the extent to which this may be done. On the whole, therefore, I think we might fairly challenge those who deny the perfection of the Universe to set out clearly their conception of what a perfect whole should be, as against this Universe of growth. Dr. McTaggart, in particular, might be asked to paint for us the rose without thorn. The world in which we live, with all its imperfection and even horror, is still lit up with such flashes of beauty and goodness as make an optimism like that of Browning seem not at least unintelligible or an outrage. Even if we allow that the beauty that we find in the world is only a reflexion of our own ideals—that the heart, if I may so put it, that 'dances with the daffodils,' is the same heart that first invented their dance; yet, at any rate, it is only through some such self-objectification that it learns to dance at all. We know of no other way. Can it really be held that we know of any other kind of goodness than that which we discover through our interaction with the

world? It would seem that the most perfect ideals that we can form are only our world lit up. We create our gods, and there is nothing in our thought of them that we have not somehow found within our own experience. Now, if the only good that we know in our actual experience is a good that stands over-against evil, and that is realised through progress, it is hard to see how any one can give a coherent account of a non-progressive system in which anything equally good would be possible. A world without progress would indeed deserve to be stigmatised as a 'block universe' Milton was not very successful in picturing either a Heaven or an Eden that had any real interest or depth of beauty apart from the possibility of fall and conflict; and the wiser Dante did not even attempt to picture a paradise except as something to be won through human growth and endeavour. Most of what I am here urging has been sufficiently brought out by Dr. Ward in his recent Gifford Lectures, though of course I believe that the theories of activity and contingency [1] that underlie his whole mode of treatment are in want of great modification.[2] But no doubt considerations of this kind are to many minds unconvincing; and I certainly agree with Dr. Ward in thinking that they can hardly be said to amount to proof. They only justify us in setting up a hypothetical ideal. Of the simpler orders in the Universe we have sight; of the higher and more complex orders we have only vision or insight: and for most of us this is less satisfying than sight.

17. Moral Order.

The fact, however, that we can only set up this ideal order as a rational hypothesis, or, as it is sometimes called, an object of faith—or, as Dr. McTaggart has put it, that philosophy only 'gives us hope'—makes it specially important to notice (what is so often called in question) that at least the setting up of such an ideal has a certain practical value in human life. It seems clear at least that we can to some extent determine the order of values by reference to such an ideal. We can see, in a general way, the direction in which we have to move for the creation of values of a more perfect and satisfying kind.

[1] There is no doubt contingency from the point of view of any subsidiary order. We cannot account for the number of primary colours from the properties either of colour or of number. But it hardly seems conceivable that there can be any contingency from the point of view of the whole Cosmos.

[2] Since this was written, the soul of goodness in things evil has been strikingly brought out in Dr. Bosanquet's book on *The Value and Destiny of the Individual.*

We see also that such insight as we can thus gain is not without a practical efficacy, through the connexion of the order of value with the causal order. Our discovery of values helps us to realise them, both subjectively, by enabling us to take a more and more universal point of view, and objectively, by bringing our world more and more into accord with our conception of what is beautiful and good. This we can certainly do to some extent; and the progressive accomplishment of it constitutes what may be described as the moral order. If this order is destined to remain only as a small fragment that we win for ourselves from the realm of chaos and old night, then no doubt we must admit, with Mr. Russell,[1] that human life is in its essence a great tragedy. Even so, however, it would still be a drama that has considerable beauty and significance; and here at least we have a good that is not merely hypothetical. Moreover, I see no particular reason for supposing that the outlook is quite as black as he represents. 'If hopes were dupes, fears may be liars.'

18. General Summary.

This is a very bald and ragged outline, I am well aware—very far from a perfect order. But it indicates a line of thought that I have certainly found helpful in removing a considerable number of the most fundamental difficulties; and I have thought that it might be of some service to others. It has been my endeavour to exhibit certain fundamental conceptions as being involved even in the simplest facts of experience; and to show that reflexion on them leads us gradually to the recognition of a certain ideal order, which is at least the foundation of our moral aspirations, and may perhaps serve as a basis for an idealistic or spiritual interpretation of the Universe. My contention is that there is nothing even in sense which does not already imply something of the nature of an ordered Universe. Such an idealism does not seem to be in any way opposed to what is commonly called realism; and it seems to me that we may find in this method of treatment a possible conciliation between views that are usually regarded as antagonistic. But it may very well be that this eirenicon, like some others, may not prove altogether acceptable to either party. It is not really as an eirenicon, however, that I have put it forward, but only as a sketch of the general way of regarding the problems of philosophy that has long seemed to me to be the truest and the most fruitful. It may serve at least to make a little clearer the view that was suggested in the previous paper on Time.

[1] 'The Free Man's Worship' in *Philosophical Essays*.

III.—BERGSON'S "CREATIVE EVOLUTION" AND THE INDIVIDUAL.

By Rev. Oliver Quick.

In a sense the aim of every metaphysic is and must be to make a unity of existence, to discover a principle or form of Being which underlies all its individual and particular manifestations. A good deal of recent philosophy however has regarded the problem from a new standpoint. The tendency of the traditional systems, it would tell us, whether of the idealistic or of the materialistic school has always been to find this unity either in abstract mind or in abstract matter. But recent criticism of intellectualistic methods rests fundamentally on the assertion that the living personality is a wider entity than the intellect which is one of its instruments, and that the self-conscious life of a person does provide a sort of knowledge which the intellect cannot either prove or deny. It is affirmed therefore that the activity which abstracts is more real than the abstractions whether of mind or matter which it makes; and the tables are thus turned on the traditional logic both of materialism and absolutism. Once this point of view is adopted, it is clear that the nature of the unity which the metaphysician must seek to establish has undergone a very considerable modification.

Prof. Bergson's *Creative Evolution* is perhaps the first serious attempt to construct a metaphysic which shall employ to the full this new method in philosophic thought. Any such endeavour must obviously be faced with a peculiar difficulty in relating the individual to the universal, and it is interesting to examine what means Prof. Bergson would use to deal with this problem. His philosophy starts with the affirmation of individual freedom. His criticism of determinism and its psychology ascribes a real undetermined activity to the human mind. But Prof. Bergson is emphatically not a thoroughgoing individualist. Though its method is novel, the aim of his metaphysic like that of its predecessors is to establish an underlying unifying principle beneath the particular manifestations of life. Only, true to

his great conviction of the inadequacy of intellectual abstractions, he tries to find this unity not in any static or formal identity which transcends differences, but in a dynamic actual force which works through them. All life, he tells us again and again, is one. The one *élan vital* runs through all the divergent lines of evolution, though the one current splits up ever more and more and its various branches separate ever more widely from each other as it advances. In spite however of the widest divergence of the three main channels into which the stream has divided (the channel of automatism developed in plants, the channel of instinct in insects, the channel of intelligence in man), the facts of science can prove a parallelism of development along various lines of evolution which cannot be accounted for by the operation of any mechanical causes such as those of natural selection and adaptation. These facts of observation, combined with the deepest intuitions of our conscious life, reveal a real activity, one yet undetermined, trying to realise itself by diverging efforts and different instruments, and so dissipating itself along the paths of an age-long journey of which the goal, if goal there be, is utterly unforeseen.

> ἅπανθ' ὁ μακρὸς κἀναρίθμητος χρόνος
> φύει τ' ἄδηλα καὶ φανέντα κρύπτεται·
> κοὐκ ἔστ' ἀελπτὸν οὐδέν.

The vision is not lacking in a certain cosmic magnificence. But however far scepticism of intellectual criteria may proceed, an appeal to intuition must not be used as an escape from criticism. The vicious bias of the intellect in favour of what is clear-cut must not be made an excuse for offering what is only vague. When it is judged by the ordinary methods of critical philosophy Prof. Bergson's vision presents at first sight a strange discrepancy in its treatment of individual value. On the one hand we have the fundamental assertions of the freedom of the will in the individual, and that the effect of life upon matter is in a real sense to individualise it into organised bodies.[1] And on the other hand we find a number of metaphors and quasi-metaphors which distinctly suggest that the individual and separate sources of action are in a measure illusions which only find their reality in the one universal activity of life itself. We may instance the metaphors representing life as an ocean and as a super-man to which we shall return later. Still more often again the individual activity is mysteriously represented as the means of the transmission of the universal, whereas

[1] *Cf. Creative Evolution*, p. 13 *sqq.*

sometimes it is said to run counter to it. Thus on p. 243 we read that "life can progress only by means of the living which are its depositaries": whereas on p. 53 we had been told "each species, each individual, even retains only a certain impetus from the universal vital impulsion and tends to use this energy in its own interest;" and on p. 14 individuation and reproduction are said to be hostile tendencies. What then apart from metaphor is the relation of the cosmic impulse to the individual freedom, of the universal life to its particular manifestations? Neither materialist nor absolutist finds much difficulty in giving an intelligible, if unsatisfactory, account of the relation of his universal to the particular. Both frankly sacrifice the latter to the former. The materialist tends to find more and more that the apparent divisions and discontinuities of matter are arbitrarily fixed and unreal, and that the final reality is a kind of mechanical energy to which all things may be reduced. The absolutist, at any rate if Prof. Bergson's criticism of the intellect be sound, must follow what is up to a point much the same process. Starting from particular minds he tends to break down the barriers between them, and to conceive his ultimate as some universal Mind which transcends and includes all oppositions in an eternal Being. The essential similarity between the two methods of reasoning lies in the fact that both try to find an ultimate identity inclusive of all reality, the datum of reality being first conceived as a plurality of static objects, whether mental or material, inter-connected by relations. Both, it might be said from the point of view of Bergsonian criticism, are fundamentally in search of a transobjective identity. This is the whole alleged vice of the intellectual method, which, just because it involves the arresting and analysing of reality as permanent object, cannot but ignore or make nonsense of activity and change. But the moment we try to follow Prof. Bergson and start from activity, we are confronted with the fact that activity is essentially of the subject. We may indeed perceive motion and change in objects, though only as relative to rest and identity. But an activity we cannot perceive or even represent to our minds as an object. Our knowledge of activity is our experience of ourselves as conscious subjects and we can only infer its presence in the external world. Hence, since to analyse reality we must regard it as object, the inevitable determinism of logic and science. But hence also a difficulty for Prof. Bergson. The activity from which he started must be of the individual subject. How then can it be universalised? He has discarded the traditional method which looks on reality

as made up of objects and their relations. Therefore no transobjective identity however conceived will help him. The unity he seeks is that of a trans-subjective activity. This is the reason why, when he wishes his readers to realise the nature of the vital impulse, he appeals to the deep inward intuitions of their self-conscious life.

Before however we proceed further, the question may be raised whether in some ways Prof. Bergson's own language does not tend to confuse the issue. He is continually using almost interchangeably, without any attempt to define their relations to each other, the terms motion, change, and activity, apparently for the not very good reason that the intellect cannot grasp any of them. This vagueness tends to obscure important distinctions. It is at any rate fairly obvious that all movement in space involves (1) a thing to move which must itself maintain a certain internal identity and fixity, and (2) a relatively static environment of some kind in relation to which the movement takes place. Even the movements of the heavenly bodies must be conceived as taking place in relation to some kind of fixed environment, and to talk of a moving universe is strictly speaking nonsense.

Again, since the days of Plato philosophy has been familiar with the proof that absolute change is impossible, because change in order to have any meaning must always be relative to the identity of the thing changing. The nature of the relation between movement and change however is not so clear, and it is hard to see that any new suggestion of the ultimate reality of flux is conveyed by Prof. Bergson's demonstration that the intellect is unable to grasp the process of motion. Whether or not the plausibility of Zeno's famous paradox is due to the inability of the intellect to grasp the continuity of the arrow's flight, the arrow in order to fly must maintain a fixed identity in space separate and discontinuous from its environment. In abstract terms then it may be said that motion is change in the spatial relations of objects and as such excludes change in the objects themselves. Hence the incapacity of the intellect to grasp the process of movement not only fails to prove that movement is in any sense more real than its opposite, but also, since movement is only a special kind of change excluding other kinds, leaves the problem of change in general practically untouched.

Turning next to the relation of change and activity, a vital distinction must be remarked between change in inanimate and in animate objects. In the case of an inanimate object a mere quantitative difference of outline is sufficient to destroy its individual identity, the reason being that that identity

consisted simply in the outlines or spatial determinations of that object presented to our senses. When therefore we realise that these outlines are always changing more or less, we come to the conclusion that the identity of the object is only an abstraction and even a figment of our minds; and if we reflect still further we see moreover that in so far as we destroy identity in things we destroy change also as its correlative.

But with animate objects the case is quite different. Their individual identity does not depend on identity of outline presented to the senses. Nothing could be more different in outline than a moth from a caterpillar or an oak from an acorn. Yet in the caterpillar and the moth, in the acorn and the oak, we find a real identity, although their outlines are more obviously in a state of continual change than those of a stone or an ink-pot. And for this fact only one reason can be assigned. The identity consists in some form of subjective vital activity which we attribute to the animate object. It is this activity which makes real together identity and change which in inanimate objects seem like mere abstractions and figments. When I say, "The rock crumbles," both identity and change are abstractions, because I have no idea of what the rock, as itself, is: as it crumbles it fades gradually away into "no rock," and yet nothing is dead and there is no break in the matter which constitutes both the rock and its environment. When I say, "The tree grows," identity and change are real in so far as the vital activity which is their source separates the tree into a real individual. Now Prof. Bergson clearly lays stress on the superior individuality of the living body over the inanimate object. He even goes so far as to assert that it would be wrong to compare the living body to an object at all. "Should we wish," he says (p. 16), "to find a term of comparison in the inorganic world, it is not to any determinate material object but much rather to the totality of a material universe that we ought to compare the living organism." But in laying the whole stress of the contrast between animate individual and inanimate object on the difference between organised body and unorganised matter he loses sight of the more vital distinction to which the same contrast points, the distinction between activity and mere change or flux. Change and identity in objects are equally relativities and abstractions, meaningless when treated as ultimate realities. Change and identity are realised together in the conscious personal activity of a subject; and it is only so far as we postulate something of the same kind, though in infinitely lower degree, in the tree or the amœba,

that its individuality and life become intelligible to us. Activity in subjects, not change in objects, is the reality of life. It is a trans-subjective activity alone which can give to life an essential unity.

It is hard to avoid the conclusion that the reality of this difficulty has been obscured in Prof. Bergson's own thought by his tendency to speak loosely of activity and life in terms of movement and change. This confusion, if such it may be called, has unduly simplified his metaphysical task. It enables him to evade the problem of unifying and universalising the subjectively realised and individual activities from which he must start by speaking vaguely of the whole of life and indeed of the whole of reality as a movement. Now movement and change considered as belonging to objects are clearly abstractions correlative to their opposites, and when as felt in consciousness they are given a non-spatial significance, they are then mere aspects or products of individual activity, in which identity and change are together realised. Hence to talk of the whole of life as movement or change without carefully examining the limits and application of the metaphor is a mere figure of speech which cannot carry more than a poetic significance.

Leaving out of account, then, generalities about the ultimate reality of change and movement, let us ask in what sense Prof. Bergson regards all the various individual activities of life as one, and by what arguments he seeks to establish this unity. The first main argument on which he relies is drawn from the fact of evolution. He notices striking similarities in the developments of life along diverging lines. Neither the developments themselves, he argues at length, nor their similarity can be accounted for by the operation of purely mechanical causes, such as those of natural selection and adaptation to environment. The only possible hypothesis, therefore, is that the developments and their similarity are the products of a real activity which is fundamentally one. But the different lines of evolution tend to diverge more and more, and the future is unpredictable. Hence the unity is behind, not in front. It is the unity of the original impulse which started all life upon its course. "Harmony," we are told, "is behind us rather than before. It is due to an identity of impulsion, not to a common aspiration" (p. 54). The phrase, "original impetus of life," occurs on p. 92, and on p. 268 the impetus is said to have been given "once for all". Let us ask ourselves carefully what is the precise meaning of the highly elusive identity thus established. The unity of life is the unity of its original impulse or *élan*.

This is really a metaphor and it is one which is singularly difficult of precise application.

(1) I may in the first place think of the impulse I can impart to a material body, *e.g.* a stone, when I throw it through the air. If I throw several stones simultaneously the similarities and divergencies of their motion will be accounted for by the unity of the impulse which started them. Obviously however this simile will not help us in the present case. A case of inert matter acted on by a living activity external to it is radically different from a case in which living activity is both the agent and the thing acted on. The resemblances in the motion of the stones are only reduced to an original unity just in so far as it is asserted that the stones are not themselves active at all but are determined by an external force. But *ex vi definitionis* the resemblances between the particular activities cannot be thus explained; for life is that which is not determined by external forces. Spontaneous activity implies a subjectivity, and must not be confused with the motion of objects. To take Prof. Bergson's account of the unity of life in this sense must destroy the spontaneity which he affirms to be life's essence. And in fact Prof. Bergson has carefully guarded himself against such misinterpretation.

(2) We must then think rather of the way in which my activity may impart an impulse to various other activities which in turn impel others so that in a sense my activity goes for ever outward in widening circles. The various activities are ever more and more remotely affected by mine, yet all may be said in a sense to have in it an original unity. This is the kind of interpretation Prof. Bergson suggests when he admits (p. 271) that the term "impetus" is only a physical metaphor and that life is in reality of the psychological order. The illustration rests on a fact of everyday experience which is a commonplace with the poet and the preacher. Unfortunately it only means here a change of simile which does nothing to solve the present difficulty. For all the activities of which it speaks are individual. On this showing, then, the original impulse of life becomes simply another individualised activity added to all the others, the resemblances and developments of which it is somehow supposed to explain. But just because it is only an addition to their number it cannot do so; for what Prof. Bergson professes to discover in it is the unity underlying the very plurality and differentiation of individuals. It is vain to urge (as on p. 271) that "it is of the essence of the psychical to enfold a confused plurality of interpenetrating terms"; for so far as

our experience goes, this is characteristic only of the individual mind and tells us nothing of the nature of a universal psychic life enfolding the individuals. This second simile, then, while it enables us to retain the spontaneity of individuals gives us no account at all of their unity.

(3) Probably our mistake so far has lain in trying to regard the original impulse as separate from and external to the individualised activities of which it is the source. Possibly all Prof. Bergson means by his doctrine of an original unity is the observed fact that, as the streams of evolution are traced backwards, differentiation becomes less and less marked, individuality less and less defined, until when the process reaches its logical conclusion the origin of life is found in a single primitive impetus acting upon matter. But the objection to this third attempt at exegesis is that it fails to explain anything. For it is obvious that as vital activities are traced farther and farther back towards their source they lose more and more all special characteristics. As they become more and more one, they become more and more a bare principle of inexplicable spontaneity in matter. When therefore the conclusion is reached the original impetus is seen to be quite characterless. It is called an *élan* because it is nothing more. It is called one because it is not nought. Now to discuss whether such an impetus (if the word "such" may be used of that which has no specific quality) has or had any real existence is clearly superfluous and beside the point. For obviously such a bare form of spontaneity can do nothing to explain particular resemblances in the behaviour of different individualised activities. Spontaneity itself cannot possibly make different activities act in the same way.

To put the argument shortly. Resemblances between particular activities can only be explained by reference to one original activity if that activity has some character. But characteristics are all, relatively at least, individual, in the sense that they all belong to special forms of life. Hence the original activity must also be a special form of life. But then it cannot be the unity underlying special forms.

The hypothesis, then, of one original vital impulse is quite incapable of fulfilling the purposes of explanation for which it was formulated. No doubt Prof. Bergson sees that to call the unity strictly original can never be satisfactory. For it is only postulated to account for derivative resemblances and developments, and a unity which manifests itself in derivatives cannot be merely original except in a purely logical and formal sense. So he speaks clearly of the impetus being "sustained right along the lines of evolution into which it gets divided"

(p. 92). But even when we take full account of the modification thus introduced into the originality of the impulse which unifies life, the only result is a vague impression of a substratum of unity permeating the whole stream of individuals, but found in greater purity the nearer we ascend to the source. It is undoubtedly the idea of such a substratum that Prof. Bergson's language often suggests, *e.g.* when he speaks of the original impetus "passing from one generation of germs to the following generation of germs through the developed organisms which bridge the interval between the generations" (p. 92). A complete physical illustration is presented by Weissmann's hypothesis of the continuity of germ-plasm. But unfortunately Prof. Bergson's whole philosophic attitude makes this conception in his case almost unintelligible. The unity is not a substance or essence but an activity. How then can an activity which, as far as our experience goes, is only realised subjectively as individual and discontinuous be in any sense represented as a universal substratum of identity? To call life a "visible current" (p. 27) is in this connexion only a darkening of counsel. Nor can we evade the difficulty (as Prof. Bergson might seem at times to suggest) by finding the unity of individualised activities in the bare principle of spontaneity itself. For not only is this an abstraction, but it is manifestly futile as an explanation of likeness, however reasonably it might account for difference. The conception of an *élan* at once individual and universal, at once original and sustained, at once discontinuous and immanent, causing at once divergence and likeness, a characterless spontaneity itself, yet determining the character of spontaneities, is surely a feat of mental gymnastics which even the least intellectual of minds might well find difficult to follow.

But the argument from the facts of evolution is of course by no means the only, or even the chief, proof by which Prof. Bergson seeks to establish his theory of the unity of life. In dealing with activities which can only be realised in the conscious life of a subject, it is only reasonable that the external methods of science should be regarded as ancillary to the internal method of intuition. There is no need to discuss here the nature of intuition itself or the possibility of criticising the validity of its somewhat oracular deliverances. It will be enough to notice a subtle change which seems to come over Prof. Bergson's conception of the unity of life when he adopts the intuitional rather than the scientific point of view. "Philosophy," he declares (p. 202) when he quits scientific discussion to sketch the method of metaphysic,

"can only be an effort to dissolve again into the whole." Surely a passage like this suggests a very different idea of unity from that described on p. 83: "each species, each individual even retains only a certain impetus from the universal vital impulsion and tends to use this energy in its own interests". In this latter the individual is an active force external to and even opposing the universal, which in spite of any attempt to avoid the implication becomes dangerously like a common and unchanging substratum of essence. In the former case the universal activity has become "the whole," and the individual seems to appear only on its surface practically as a sort of epiphenomenon possessing as it were a kind of bastard freedom, the only philosophic exercise of which is suicide. In the one case the universal is a common datum on which the individual works. In the other it becomes a sort of superconsciousness into which the individuals are compounded. In the one case the unity tends to be original. In the other it tends to be final. Of these two contrasted points of view Prof. Bergson seems to effect no real synthesis. Rather he continually seems to halt and oscillate between them. "Life," he says, "can progress only by means of the living which are its depositaries" (p. 243). Again, "we shut our eyes to the unity of the impulse which passing through generations links individuals with individuals and makes of the whole series of the living one immense wave overflowing matter". (p. 263). Yet again, "It is as if a vague and formless being whom we may call as we will man or superman had sought to realise himself and had succeeded only by abandoning a part of himself on the way" (p. 243). "Vague and formless" is perhaps a more exact description than Prof. Bergson himself would care to admit. To return to our starting-point, how can we conceive a universal trans-subjective activity, an activity which can in a sense explain and embrace the individual subject without destroying the reality of its freedom? That is the problem, and thereof Prof. Bergson does not really attempt a solution. Instead he offers the reader a series of metaphors, generally concerned with wind, water or explosives, ignoring the fact that the whole question hinges upon their application. Otherwise he contents himself as in a passage already quoted with appealing somewhat vaguely to the analogy of our individual consciousness. But this is beside the point. For the problem is not one of the relations of individuals to each other, nor of the inter-relations of the component parts of an individual consciousness, but of the relations to individuality of a universal life.

Let us in conclusion try to define some of the conditions

on which alone a metaphysic of real activity can become intelligible.

(1) Assuming the standpoint of the Bergsonian criticism no activity can ever, as he rightly insists, be apprehended by any process of intellectual analysis. Reality to be analysed by the intellect must be arrested and considered as object. This is the essence of Prof. Bergson's contention that the intellect is suited only for operating upon matter. Activity cannot ever belong to the analysed object as such but only to the analysing subjects. In other words the intellect can only deal with the determined and never with the determinator, though a determinator is ultimately involved by the idea of determination, as the Greeks saw when they personified *Ἀναγκή*. This is why the idea of cause, which involves the whole process of determination, is found by strict logic to be meaningless, and can only be realised by reference to the causation experienced in himself by a conscious agent.

Perhaps it may here be suggested in passing that Prof. Bergson's description of matter as "necessity itself" is vague and misleading. The idea of necessity is an abstraction which to be realised involves a necessitator and a necessitated. Now if life be typical of that which is active and determining, matter is typical of that which is passive and determined; and this relation seems somehow analogous to that of subject and object. Just as life as such is never conceived strictly as object and as determined except by being in thought somehow materialised, so matter is never conceived as subject and as active except by being in thought somehow vitalised. True, a mutual transference between life and matter of the terms proper to each is continually necessitated by common speech and thought; and yet this process of metathesis when reflected on is felt in a sense to involve a metaphor, though undoubtedly it expresses a reality. Here lies another problem which a too easy use of physical metaphor tends to obscure. Surely the relations and inter-relations of the opposed categories of life and matter, active and passive, subject and object, demand more attention than Prof. Bergson has been able yet to bestow on them. Unfortunately his own attempt to relate life and matter as inverse directions of the same movement seems unintelligible without some discussion of the nature of movement and its relation to activity.

To return however from this digression, it may at any rate be affirmed that a universal activity can only be apprehended by an intuition similar to that by which we either feel immediately in ourselves or infer in others the reality of individual activities.

(2) The universal activity must be supra-personal. A peculiar difficulty in conceiving a universal activity lies in the subtle danger that, just when we think we have succeeded, our universal may turn out to be no more than a hypostasised aspect of the individual which it therefore cannot possibly embrace. Whether we call our universal a Will, an Intellect, an Energy or an *Élan*, it becomes clear on reflection that it is only an abstracted aspect of our whole personal activity, and we do not make it any the more able to embrace that activity by extending it through all space and time, or even by writing it with a capital letter. And how deep does this habit of partial projection of personality extend? It has already been suggested that the very idea of change has no more than the relative significance of an abstraction until it is realised in the personal activity of conscious subjects. The same appears to be true of causality which admittedly becomes meaningless when supposed to exist objectively in material phenomena. How far might similar reasoning be applied even to the idea of negation? Prof. Bergson spends much skill in arguing (p. 287 *sqq.*) that the so-called idea of annihilation only means the substitution of one thing for another, and in the case of material objects he seems to prove his point. But when we come to our own consciousness the case is different. I have completely lost consciousness for a time. Certainly I cannot know or affirm it till consciousness is regained. But then nothing can persuade me that there has not been a real gap to which no notion of substitution bears any relation. And surely we can all conceive that in an absolute sense ἦν ποτε ὅτε οὐκ ἦμεν. Or take the negative proposition. "Negation," says Prof. Bergson, "is only affirmation in the second degree" (p. 303). When, he argues, I make the statement "the table is not white," I am warning you or myself that a hypothetical judgment affirming the table's whiteness is about to be replaced by another affirmation. True, but take a judgment negating my activity, "I *cannot* find my spectacles". What are the two implied affirmations? And do I not experience a real negation here? And if negation is only realised by reference to my activity experienced as limited, how far is every use of an active verb a metaphor from my activity experienced as effective? The more we follow this line of thought the more it seems that the unity and harmony of life exist not in its original germ but in its final product, not in the objectivity of a movement but in the subjectivity of a person. At least we may conclude that which claims to embrace the personal must be more and not less than personal itself. And it must always be remembered that

when we are dealing with persons and subjects the terms "more" and "less" have nothing to do with objective extension through space and time.

(3) A universal activity must be other than the mere aggregate of individual activities. It is obvious that activities cannot be compounded into a whole like drops of water. To say that the universal activity is the aggregate of individuals is to say exactly nothing; for the whole difficulty consists in understanding how and in what sense activities can be summed. If on the other hand the unifying principle is merely a common factor in all, we return to the idea of a substratum, to which, as we have seen, it is equally hard to attach a meaning in this connexion.

(4) The universal activity must in a sense be timeless, *i.e.* it must transcend what Prof. Bergson calls real duration. This real time is a medium of absolute change in which the absolutely new is continually coming to birth. It is then pertinent to ask in what sense can a real unity run through it? How can life of which it is the stuff be really one? To this question Prof. Bergson himself does not supply a clear and direct answer. To say that the unity is change itself does not appear to mean anything. We have however already suggested that change and identity are only realised together and in individual life. Can we say then that life as a whole is one through the change of real duration in the same sense that the individual is one? Is not this again to beg the whole question by speaking of the universal in terms of individual? To this it may be replied that, as Prof. Bergson points out, individuality is only a matter of degree and development. As we look back up the stream of evolution individual distinctions seem to fade away and yet we find life. Consequently unity through the change of duration belongs not only to life as individual but to life itself of which individuality is but a development. But it is just this kind of reasoning which supplies the main objection to Prof. Bergson's theory of evolution. It ignores the fact that only in the self-consciousness of the individual is life experienced and apprehended as an activity, a unity in change, an identity in difference, in short as an ultimate reality. The life out of which this individuality is supposed to have developed is really only an x, an inexplicable principle of spontaneity in matter looked at externally and consequently inapprehensible, since spontaneity can only be grasped as real in individual consciousness and is only really significant in connexion with that personal whole. If then "we must no longer speak of life in general as an abstraction or as a

mere heading under which all living beings are inscribed" (p. 27), the universal must embrace and not negate the complete individual distinction which is at once the highest and latest development of evolution and the only means by which we realise the idea of life at all. Hence the unity of life if it exists as anything more than an abstraction of individual thought is seen to be final quite as much as original; which is to affirm its transcendence of real duration.

Now it is a perfectly true criticism of the foregoing remarks that, though they are to some extent positive in form, they are altogether negative in content. They do not help us at all to conceive a universal activity acting through the subjectivity of individuals without destroying their freedom. It may be that their effect is only to make nonsense of the whole problem considered from this point of view. Or possibly again, as the late William James might have held, they point to some form of supra-normal experience as the only method of overcoming the difficulty. The purpose however of this rambling discussion will have been achieved, if it serves to point out and define a certain vagueness and confusion in Prof. Bergson's whole conception of universal life and of its relation to the individual. If the vice of most metaphysical unities is their abstractness, and if the new method is to be based on the exaltation of the whole personal activity over the abstractions which it makes and the instruments which it employs, let us at any rate think out quite clearly how deep that principle of abstraction goes into all our thought. We shall not then content ourselves with hypostasising an impetus or a spring which is no less an abstraction because it happens to be derived from the active as opposed to the cognitive aspect of our personality. Above all things let us beware of bridging the gulf that lies between individual and universal activity with the flimsy thread of physical metaphor. Otherwise the new metaphysic may turn out to be worth no more than the old yet ever fresh discovery of Strepsiades—

Δῖνος βασιλεύει τὸν Δί' ἐξεληλακώς.

IV.—WILLIAM JAMES AND HIS PHILOSOPHY.

By Howard V. Knox.

As a philosopher, William James was singularly fortunate in the matter of education. He was brought up in close familiarity with the concrete sciences of physiology, biology and medicine, and under the eye of a naturalist of genius, Agassiz. And like Hobbes, Locke, Berkeley, Hume, Mill, Spencer, to mention only English writers, he was never taught any philosophy academically. He sometimes said that the first philosophical lectures at which he was present were those he was himself called upon to give as a professor at Harvard. As seems only natural in the son of a Swedenborgian writer, and in the brother of Henry James, the novelist, he was clearly impelled by his personal bent to the study of life and mind. After what was perhaps not altogether a false start as an artist, he began the approach to his manifest destiny through the portals of the Medical School at Harvard. With Harvard he remained identified until his retirement in 1907—up to within three years, that is, of his death on the 26th August, 1910, at the age of sixty-eight. As a student of medicine he was naturally drawn to physiology. As a physiologist his interest centred in the functioning of the brain and nervous system; and he was thus brought face to face with the biological fact that the brain is not merely an organ for the registration of sensations, nor even for 'disinterested' intellectual construction, but is, quite specifically, an organ of reaction upon stimulation, *i.e.* an instrument of action. His dissatisfaction, on the other hand, with the vagueness and inconsistency of the materialistic theorising in regard to that fact, drove him to a closer study of the nature of experience as seen from within. And so he woke one day to find himself a devoted student of the human mind, with that freshness and lucidity of vision which comes alone to the man who is permitted to follow his soul's affinities whithersoever they lead him, and is not wearied and staled by having to wade through a traditional syllabus carefully adjusted to the interest of examiners.

The demon of logical *Folgerichtigkeit*, backed by superficial appearances, will here insist on noting that from psychology James was led on to philosophy. But it would be truer to say that he remained a psychologist at heart, and that it was precisely his psychologic insight that enabled him to discern the personal sources of the big philosophical antitheses. James's fidelity, therefore, to what may *sub specie æternitatis* be reputed so trivial a thing as the human soul and its destinies, need not necessarily be construed as a philosophical limitation. It can, in fact, be so construed only if the distinction between psychology on the one hand, and logic and metaphysics on the other, be taken so absolutely as is the fashion more especially with 'idealistic' writers. But what has strangely escaped the notice of such writers is, that the assertion of this distinction as irreducible and absolute is really a *confession*—a confession, namely, of total inability to establish any intelligible relation whatsoever between the Absolute and the human individual. It would not be correct to say that the distinction, so taken, is responsible for the absolutist fiasco: it *is* that fiasco.[1] For here, at least, it is true that there is nothing in the end but what was in the beginning.

James himself does not argue this question dialectically: such was not his way. But the *Principles of Psychology* show on every page how, for the psychologist, the abstract distinction between psychology and philosophy begins to fade in the light of concrete investigation; while the incidental criticisms of current philosophical doctrines perpetually suggest that for the metaphysician the only choice is between

[1] This has been, in principle, more fully shown in my articles on "Green's Refutation of Empiricism" in MIND, January, 1900, N.S., No. 33, and on "Pragmatism: the Evolution of Truth" in the *Quarterly Review*, April, 1909, No. 419. In Green's case the fiasco takes the shape of asserting the impossibility of 'comprehending in a single conception' what are nevertheless pontifically declared to be two 'aspects' of one and the same consciousness. But in every defence of Absolute Idealism the final *impasse* is essentially the same. And in every case the *impasse* is simply the final bringing to confused consciousness of a diremption inherent in the 'philosophy of identity' from the beginning. There are, however, several possible ways of developing Absolute Idealism, which would place it beyond the reach of this criticism, and which should offer no special difficulty to anyone who has received a sound Hegelian education. Why not explain, for instance, that things which have nothing else in common must of necessity share the identical difference which appears to divide them; that the greater the diversity, the more *fundamental* must be the underlying unity; that Absolute Difference is therefore the supreme type of Identity; and that thus the profounder meaning of the Law of Identity is, that A is never so truly itself as when it wears the outward form of some other letter of the alphabet?

good psychology and bad psychology. Of especial importance in this connexion is James's exposure of the dependence of Kantism, whether in its original form or in its English versions, on the psychological atomism of Hume.[1] And even where, as in the Objective Idealism of Green, the psychology has gone so very bad as to be hardly recognisable as such, we are made to feel, as we read James's good-tempered criticism,[2] that it is just the remnant of subjectivism, which such pathetic efforts are made to eliminate, that enables the 'system,' however perversely, to retain a spectral after-glow of meaning. It is just this, we perceive, that allows us to regard the meaning as logically confused instead of as psychologically non-existent—as in moments of exasperation one is tempted to declare.

The *Principles of Psychology*, then, are of profound philosophical importance, if only because the perusal thereof raises doubts as to the superhuman origin and eternal validity of the traditional borders and inveterate antagonisms between the various philosophical disciplines. James, being more interested in discovery than in definition, was not to be deterred from pursuing various vital questions simply because they were ruled out *a priori* by such formal and arbitrary distinctions as those between logic and psychology, or between logic and ethics.

It is precisely on the border-line between reputedly different sciences that the most interesting and fruitful discoveries are to be made. And the philosophic sciences, more than any others, were sorely in need of cross-fertilisation to renew their vitality. These particular distinctions can claim no special exemption from the supreme law that distinctions can retain logical significance only by proving their utility in concrete inquiry. This general principle knocks the bottom out of Formal Logic *überhaupt*, as completely as the particular application here suggested knocks the bottom out of Absolutism. And that is why Absolutism is, in its true inwardness, not Formal Logic gone mad, but Formal Logic with its madness made plain.

But over and above this general significance of the *Principles*, it is to be noted that all James's later writings simply enforce the underlying philosophy, and expand the overt teaching, of that great work—though with a curious lack of express references. To show in detail how James's philosophy is foreshadowed, and in all essentials pre-formed, in the *Principles*, would lead us too far afield for the purposes of this

[1] *Principles of Psychology*, i., 360-370.
[2] *Op. cit.*, i., 366-370, and ii., 9-11.

paper. But a few detached quotations, taken from vol. i. alone,[1] may help to drive home a point which is not even yet as fully recognised as it should be.

"The study of the phenomena of consciousness which we shall make throughout the rest of this book will show us that consciousness is at all times primarily a *selecting agency*" (p. 139).[2]

"The moment you bring a consciousness into the midst, survival ceases to be a mere hypothesis. No longer is it '*if* survival is to occur, then so and so must brain and other organs work'. It has now become an imperative decree: 'Survival shall occur, and therefore organs *must* so work'. *Real* ends appear for the first time now upon the world's stage. The conception of consciousness as a purely cognitive form of being, which is the pet way of regarding it in many idealistic schools, modern as well as ancient, is thoroughly anti-psychological, as the remainder of this book will show. Every actually existing consciousness seems to itself at any rate to be a *fighter for ends*, of which many, but for its presence, would not be ends at all. Its powers of cognition are mainly subservient to these ends, discerning which facts further them and which do not" (p. 141).

Speaking of the Soul: "The fact is that one cannot afford to despise any of these great traditional objects of belief. Whether we realise it or not there is always a great drift of reasons, positive and negative, towing us in their directions" (p. 181). [This is all the more striking in that it occurs in an argument *against* positing a 'substantial' Soul, for psychological purposes.]

"The mind, in short, works on the data it receives very much as a sculptor works on his block of stone. In a sense the statue stood there from eternity. But there were a thousand different ones beside it, and the sculptor alone is to thank for having extricated this one from the rest. . . . The world *we* feel and live in will be that which our ancestors and we, by slowly cumulative strokes of choice, have extricated out of this, like sculptors, by simply rejecting certain portions of the given stuff. . . . My world is but one in a million alike embedded, alike real to those who may abstract them" (pp. 288-289).

[1] The highly important chapters on "The Perception of Reality" (see especially pp. 291-298 and pp. 311-317), "Reasoning" (especially pp. 329-336), "Will" (especially pp. 569-579—on Free Will), and "Necessary Truths—Effects of Experience" (especially pp. 624-640, and pp. 661-675), are all in vol. ii. But I only aim here at giving samples to show the general perspective of the book.

[2] Italics as in the original, throughout.

"The reason why we *do* pray . . . is simply that we cannot *help* praying. . . . The impulse to pray is a necessary consequence of the fact that whilst the innermost of the empirical selves of a man is a Self of the *social* sort, it yet can find its only adequate *Socius* in an ideal world" (p. 316).

"When we reflect that the turnings of our attention form the nucleus of our inner self; when we see (as in the chapter on the Will we shall see) that volition is nothing but attention; when we believe that our autonomy in the midst of nature depends on our not being pure effect, but a cause . . . we must admit that the question whether attention involve such a principle of spiritual activity or not is metaphysical as well as psychological, and is well worthy of all the pains we can bestow on its solution. It is in fact the pivotal question of metaphysics, the very hinge on which our picture of the world shall swing from materialism, fatalism, monism, towards spiritualism, freedom, pluralism—or else the other way" (pp. 447-448).

"The whole feeling of reality, the whole sting and excitement of our voluntary life, depends on our sense that in it things are *really being decided* from one moment to another, and that it is not the dull rattling off of a chain that was forged innumerable ages ago. This appearance, which makes life and history tingle with such a tragic zest, *may* not be an illusion. As we grant to the advocate of the mechanical theory that it may be one, so he must grant to us that it may *not*. And the result is two conceptions of possibility face to face with no facts definitely enough known to stand as arbiter between them. . . . For the sake of that [mechanical] theory we make inductions from phenomena to others that are startlingly *un*like them; and we assume that a complication which Nature has introduced (the presence of feeling and of effort, namely) is not worthy of scientific recognition at all. Such conduct may conceivably be *wise*, though I doubt it; but scientific, as contrasted with metaphysical, it cannot seriously be called" (pp. 453-454).

"All that a state of mind need do, in order to take cognizance of a reality, intend it, or be 'about' it, is to lead to a remoter state of mind which either acts upon the reality or resembles it. The only class of thoughts which can with any show of plausibility be said to resemble their objects are sensations" (p. 471).

"Why from Plato and Aristotle downwards, philosophers should have vied with each other in scorn of the knowledge of the particular, and in adoration of that of the general, is hard to understand, seeing that . . . the *things* of worth are

all concretes and singulars. The only value of universal characters is that they help us, by reasoning, to know new truths about individual things" (pp. 479-480).

"The ideal working of the law of compound association, were it unmodified by any extraneous influence, would be such as to keep the mind in a perpetual treadmill of concrete reminiscences from which no detail could be omitted. . . . Let us call this process *impartial redintegration*. Whether it ever occurs in an absolutely complete form is doubtful. We all immediately recognise, however, that in some minds there is a much greater tendency than in others for the flow of thought to take this form. Those insufferably garrulous old women, those dry and fanciless beings who spare you no detail, however petty, of the facts they are recounting, and upon the thread of whose narrative all the irrelevant items cluster as pertinaciously as the essential ones, the slaves of literal fact, the stumblers over the smallest abrupt step in thought, are figures known to all of us. . . . *In no revival of a past experience are all the items of our thought equally operative in determining what the next thought shall be. Always some ingredient is prepotent over the rest.* . . . In subjective terms we say that *the prepotent items are those which appeal most to our Interest*" (pp. 569-572).

Surely it should not have been difficult to recognise that the author of such a book as the *Principles* was no 'mere psychologist,' with a happy knack of writing, but a man of original and fructuous philosophical ideas? Surely it should at least have been obvious that a new *logical* principle—that of purpose, selection, *relevance*—had arisen to challenge the age-long supremacy of the Principle of Totality? And did not this new principle clearly hold the promise, or threat, of a new kind of philosophic synthesis which, by breaking down the abstract distinction between 'subjective' and 'objective,' should at last bring together what all previous so-called syntheses had thrust apart, namely, Man and Reality? But no. So firm a hold had the conventional scheme of classification, separating once and for all psychology from logic and metaphysics, on the trained philosophical mind in this country, that the philosophical significance of the *Principles of Psychology* seems at first to have been successfully hidden by the mere title of the book. Although all the foundations of James's pragmatism were laid, and all its methods were illustrated, in his *Psychology*, no one (with the exception of Dewey and a few others) looked to it for philosophic instruction. The philosophic world slumbered behind the ramparts of a 'system' within which Appearance was the

sole portion of man, while Reality was reserved to the Absolute; nor dreamed that a foe could approach save by the familiar ways. Hence James's later and more avowedly philosophical treatises crashed into the established dogmas with the disastrous suddenness of bombs hurled from an invading airship. Even now old-fashioned intellectualists find it hard to understand that they have been witnessing, not sporadic signs and wonders which betoken that the Absolute is wroth with its people, but the beginning of a new philosophic era.

Perhaps the most refreshing thing in James's philosophy is his view as to what philosophy itself really is and means. His *Pragmatism* characteristically opens with a quotation from Mr. Chesterton, which declares that "the most practical and important thing about a man is still his view of the universe. . . . We think the question is not whether the theory of the cosmos affects matters, but whether in the long run anything else affects them." And James endorses his paradox with the explanation: "The philosophy which is so important in each of us is not a technical matter; it is our more or less dumb sense of what life honestly and deeply means. It is only partly got from books; it is our individual way of just seeing and feeling the total push and pressure of the cosmos."

These words constitute a philosophic Declaration of Independence and a truly Jacobin vindication of the Rights of Man; but they challenge the conception of philosophy held most sacred by the vast majority of professional philosophers, who would deem their subject degraded by any condescension to the human *motif*. These instructors of youth may, to be sure, speak in somewhat uncertain tones of the position to be assigned to Ethics; but in Logic and Metaphysics they hold, with lofty dignity and great positiveness, that our aim is purely impersonal and 'objective,' and has nothing to do with personal vision or even with the 'practical make-shifts' of human science. It is because James made this innovation of refusing to treat philosophy as an idle pastime, or as 'intellectual gymnastics,' and demanded instead that some rational connexion should be made out between the 'theories' propounded by professional philosophers in the lecture-room and the beliefs that human beings actually live by in the larger world outside, that he has so scandalised the one class and so interested the other.

But this novel view of the scope of philosophy entails, and reflects, a correspondingly radical change of attitude towards the facts of psychology—a change of attitude more important

than any improvement in specific doctrines. James broke entirely new ground by refusing to accept the preliminary dilemma, that to *understand* the life of the spirit is to reduce it either to a system of intellectual categories or to a set of mechanical principles. He prefers not to reduce it to alien terms at all. He has the temerity to accept conscious life at its own valuation—a *tertium quid* which enlightened psychologists and philosophers had deemed unworthy of serious recognition, and which the amicable division of intellectual spoils between psychology and philosophy is cleverly designed to suppress. It was a standpoint contemptuously abandoned to the novelist, the religious preacher, and the man of affairs. But James's disconcertingly non-euclidean mind boldly challenged the intellectualist axiom, that the parallel lines of knowing and doing must never meet. What makes his *Principles of Psychology* as valuable a handbook of Ethics as it is of Logic, is that he seems to have grasped from the first intuitively[1] what he subsequently more explicitly urged, that this dualism, immanent both in transcendental monism and in Humian empiricism, this fatal cleft between man as knower and man as doer, must lead as surely to intellectual, as to moral, disaster. In a world where human feeling and will have no place save as an unsubstantial iridescent film, human knowledge, too, can aim at nothing more significant than at masking the reality within. This is the remarkably simple explanation of the apparent paradox, that consistent devotion to the ideal of 'purely theoretic' truth finally conducts to utter scepticism.

True it is, that this admission of human *values* as pervasive of reality completely transforms the world of 'fact'. For the 'values' enter into the 'facts' and quietly possess them, and no exorcisms of the most transcendental terminology can eject them. But the transformation is a return to human nature. It is the letting in of the familiar light of day, to lighten the dark places where our feet are set. Surely it compares favourably with that invisible transformation of 'fact' which the Absolute is supposed, for its own supra-conscious enlightenment or amusement, to effect behind our backs. Does it not savour both of disingenuousness and defect of ingenuity, that idealist critics of James should have thought of nothing better than to rake out the discarded notion of 'hard fact' from the obscure rubbish-heap to which they

[1] *Cf.*, *e.g.*, *op. cit.*, ii., p. 321 : "Will and Belief, in short, meaning a certain relation between objects and the Self, are two names for one and the same *psychological* phenomenon. All the questions which arise concerning one are questions which arise concerning the other."

themselves had relegated it, and should seek to use it as a stick to beat off the humanist attack withal? The only plausible explanation would seem to be that they knew not what they did because they knew not what they meant.

And as with 'fact,' so with 'intellectual satisfaction,' which Mr. Bradley and Mr. Joachim have so elaborately shown is the very thing Intellectualism is powerless to yield. The chief burden of our complaint against Intellectualism, as represented by such writers as these, is the failure to give any coherent account of what is *meant* by 'intellectual satisfaction'. For they seem to hold (*a*) that Truth is for us that which satisfies our intellect; (*b*) that Reality, as such, is nevertheless indifferent to any satisfaction we as individuals may feel; (*c*) that these two propositions are mutually explanatory, and indeed identical.

This ghostly bogey, then, of 'pure intellectual satisfaction,' which turns out to be as brainless as it is obviously and designedly bloodless, need no longer deter us from that other way of epistemological advance which James took in *The Will to Believe*. He pointed out that our emotional nature does in fact function as a guide to, and constituent of, what we hail as a 'truth,' and that, with the proper precautions, it need not always lead us into error. For as physical science long ago found out when, after long wanderings in the desert of *a priori* dogmatism, it accepted the risks involved in the 'deceitfulness of the senses,' and persevered in the path of experiment, only what leads us nowhere will never lead us astray. James, in fact, saw that the right to experiment is no monopoly of natural science—that the field of experiment is co-extensive with conscious life. Experience *is* experimentation; and so James proposes to extend to truth *überhaupt* the rights (and risks) of scientific truth.

From the first some have perversely interpreted this as meaning that whatever belief any one may choose to adopt is forthwith established as absolutely true. James had from the outset made clear the distinction between the (psychological) will to believe which he described, and the logical right to believe which he based on it, by emphasising the need of choosing a 'live hypothesis' and of running the risk of error.[1] In other words, *verification* was the hall-mark of truth. But even his constant protests, that a belief in order to be true must work, did not avail to eradicate the 'impression' that when he said 'work,' he *must* mean 'feel pleasant'.

This queer misrepresentation instructively illustrates both the aloofness of the 'philosophic' mind from the spirit of

[1] *The Will to Believe*, p. 29.

scientific investigation, and the obduracy of the intellectualist prejudices which James sought to dispel. It betrays the philosophical *idée fixe* that as the only kind of truth worth considering is absolute truth, so every new theory of truth must needs devise some new infallible self-acting snare in the shape of an 'absolute criterion' for the capture of that shy legendary fowl. But not only was James thus accused of widening the conception of truth, in the interests of religious dogma, till it lost all meaning, he was also accused of narrowing it till it was reduced to the trade mark of worldly success —an interpretation which at least had the grace to allow that experimental testing and the distinction between success and failure were essential to his theory. These two interpretations have not even been unfailingly discriminated; but they are so incongruous both with James's text as a whole and with each other that they may safely be left by the roadside to their mutual destruction.

Others, again, have imagined that James's theory of the intimate correlation between 'theoretic' and 'practical' truth is scepticism naked and unashamed. To which the answer is that whether 'scepticism' is to be taken as a term of reproach or commendation, depends on whether it teaches lessons of despair or of hope, of intellectual death or of intellectual life. Now there is just one form of scepticism which is in the strictest sense deadly. It is that which professes to define truth in the abstract, but adds that God or the Absolute alone can know what, in the concrete, is actually true. It claims to know just so much of the 'nature of truth' as is necessary to convince us that truth itself lies for ever beyond the grasp of man. That kind of scepticism, as Mr. Bradley has himself made plain, is the outcome of idealist metaphysic. And that is the kind of scepticism from which a humanist view of the nature of truth delivers us.

And so we resume our peaceful inquiry into what James himself really did mean. As we have noted, in place of the futile, elusive conception of truth as purely 'objective' and 'absolute,' he proposes to adopt and generalise the scientific view of truth as that which stands the test of experience.[1] But verification is never even in its simplest form a matter of mere passive receptivity; and it can never be final or 'absolute,' though for practical purposes it may be complete. Always it is a question of the comparative success or failure of our endeavour to manipulate the *data* of experience in the

[1] *Cf. op. cit.*, ii., pp. 635-638 and 665-669. "'Scientific' conceptions," he says (p. 636), "must prove their worth by being 'verified'. This test, however, is the cause of their *preservation*, not that of their production."

interests of our vital necessities—necessities more imperious than any 'purely logical' necessity. The latter can only retain a footing as the servant, and not as the master, of the former. This manipulation (or 'mutilation,' as absolutist logic will have it) begins, indeed, with the breaking up of the continuous *datum* of experience into more or less distinguishable *data*. 'Pure sensation' and 'bare fact' are nothing but barefaced methodological fictions—of very dubious utility.[1]

But having once repudiated that *absolute* distinction between 'subjective' and 'objective,' which is the sure road to philosophical damnation—having once admitted a 'subjective' (*i.e.* human) element into the heart of truth—having once gone so far, James will not limit that element to matters of mere bodily moment. We are not as the beasts that perish: perhaps the beasts themselves are not that. James invites us to treat our moral and religious aspirations as methodologically on a par with scientific categories; as hypotheses, that is, concerning the possibilities of moulding the future, to be verified by their working. Of course, if we have *no* spiritual needs and aspirations, *cadit quæstio*. There will then be no ventures of thought to verify. James does not pretend to force the moral or religious life on us by logical compulsion, any more than he proposes to argue us into the satisfaction of our bodily needs, or to compel us to desire scientific knowledge. What he does say is that, as the will to live is the mainspring of all real knowledge, so the *kind* of life we will to live must determine our 'theory of the cosmos'.[2] In other words, a theory of the cosmos has no real meaning unless it is *also* a way of life. Faith without works is not even faith. And the faith to which he vindicates our right, is not to be expressed as the negation of

[1] *Principles of Psychology*, i., p. 224; ii., pp. 3-9 ("The Cognitive Function of Sensation").

[2] *Cf. Principles of Psychology*, ii., 296-298: "The *fons et origo* of all reality, whether from the absolute or the practical point of view, is thus subjective, is ourselves. As bare logical thinkers, without emotional reaction, we give reality to whatever objects we think of, for they are really phenomena, or objects of our passing thought, if nothing more. But, as thinkers with emotional reaction, we give what seems to us a still higher degree of reality to whatever things we select and emphasize and turn to *with a will*. . . . The world of living realities as contrasted with unrealities is thus anchored in the Ego, considered as an active and emotional term. . . . Whatever things have intimate and continuous connection with my life are things of whose reality I cannot doubt. Whatever things fail to establish this connection are things which are practically no better for me than if they existed not at all." (In the original, the greater part of the foregoing is italicised.)

Doubt, but as the Courage which is willing to face real risks. Not the least of James's merits as ethical teacher is to have made the primary virtue of courage the foundation of man's whole life, both moral and intellectual.

The foregoing brief commentary on what James himself seems to have regarded as the most important aspect of his philosophy is not intended—it need hardly be said—to place that philosophy beyond dispute, but rather to indicate how closely allied it is to common sense and how sharply and directly it runs counter to a host of indurated philosophical conceptions. This seems a reasonable course to pursue, as contemporary criticism still apparently oscillates between treating these views as too paradoxical for detailed consideration, and as too 'purely psychological' and common-place to be of any philosophical importance. I have tried to show that neither of these two extremes is logically justifiable.

Nothing has been said directly of James's views on the continuity of consciousness, on the nature of will, on pluralism, on immortality—the list of omissions might be extended indefinitely. I have tried to concentrate attention on the essential novelty of his general attitude to the 'problems of philosophy'—namely, his perception that philosophy in general has no meaning save as an effort to bring unity into the life of man as it appears to the man himself. The achievement of such unity was the only ideal of consistency that he thought worth aiming at; and fidelity to that aim the only kind of working consistency that a philosopher has any right to be proud of. After all, James might well be content to rest his title to fame on his having translated the question 'What makes knowledge possible?' into the question 'What makes knowledge credible, and conduct possible?' That is what in the history of philosophy will be known as James's Answer to Kant; and there are those who believe that it will rank as more epoch-making than Kant's irrelevant Answer to Hume. In a word, to James belongs the glory of having first divined the Secret of the Plain Man, and ministered to his desire for a knowledge that is relevant to action and to life.

V.—DISCUSSIONS.

FORMALISM IN LOGIC.

Good philosophic reviewing is so rare, that the readers of Mind have no doubt appreciated, almost as much as I have, the admirable lucidity, candour and vigour with which Prof. Hoernlé has acquitted himself of the difficult task of reviewing (in the last number) my *Formal Logic*, and I think it so improbable that my book will fall under the notice of any more intelligent critic, that I feel I shall not get any better opportunity of meeting the demands of legitimate criticism than by endeavouring to answer Prof. Hoernlé's questions, more particularly where they touch those parts of my design which he has not perhaps fully comprehended.

(1) Prof. Hoernlé's chief criticism is that it was an error of judgment or a lack of courage (or perhaps both) in me to attack the effete, discredited and obsolete doctrines of Formal Logic, instead of openly controverting those of the Idealistic Logic which is actually current (on p. 107 he absolves me from what might surely be considered the no less urgent task of dealing with modern Symbolic Logic), and attacking these latter only 'implicitly' by "a curious hide-and-seek method". He believes that in consequence Formalism will "continue to flourish in *other* forms" (p. 106), and that my labour will have been wasted. Now I fully realised the possibility, and even the probability, that Formalism, even in its crudest forms, might survive my attacks, as it has survived so many others, by the sheer weight of an inert tradition, but the reasons for the policy I adopted are easily stated and do not shrink from publicity.

I might easily defend myself by pleading that the great bulk of logic-teaching all the world over is still of the old Formal type, and conducted by people who thoroughly believe in it, *e.g.*, by Roman Catholic professors who teach logic more systematically, carefully and extensively than any one else; or again by showing that the 'idealistic' logic is merely for show, and that when it comes to real use in controversy its exponents always have recourse to the old Formal Logic in all its crudity, and appeal, *e.g.*, to the 'law of contradiction' just as uncritically as Aristotle, and that I had shown in my chapter on the 'laws of thought' how easily this controversial use of Formalism could be reduced to absurdity, and how unmeaning its *ultimæ rationes* really were.

But I prefer to take higher ground. I had perceived from the first (*cf.* the preface to the first edition of *Humanism*) that my doctrine was essentially a demand for a reformed conception of logic, which would have to abandon the easy-going assumption that the theory of thought could abstract from the personality of the thinker. I had found this assumption underlying all the vices and defects of the traditional philosophies, and in my *naïveté* (for I had not yet discovered how little regard rationalists have for rationality) imagined that this had merely to be pointed out clearly to lead to an immediate abandonment of this erroneous assumption. I tried therefore in every way to exhibit the impossibility of this abstraction and the absurdity of the consequences to which it led. But I soon found that both my critical remonstrances and my constructive sketches of a better, more useful and more elegant conception of philosophy were almost universally received with indignation and blank failure to understand. It is not too much to say that not 1 per cent. of the critics of pragmatism showed the faintest glimmering of an apprehension of either our motives, our reasons, or our aims. At first I thought this failure to understand, with its obstinate reiteration of the most ludicrous misinterpretations, was itself inspired by pragmatic motives; philosophers of the old schools were misunderstanding us of malice prepense, because it did not suit their book to take our meaning. But it gradually dawned upon me that they really *could* not understand us, and were afflicted with a sort of intellectual colour-blindness. Studying the psychological problem presented by this inability, I found that the reason was that their minds were unconsciously preoccupied by certain unexamined prejudices, which had been implanted in them in their youth by Formal Logic in the narrowest and most despicable sense, *i.e.*, by that very elementary drill-course to which philosophic tiros are subjected, and which advanced philosophers so often dismiss with a pitying smile. It was however from this humble source that philosophic minds first became imbued with practically ineradicable prejudices as to the nature of logic and the laws of thought, of proof, assurance and valid inference, of ambiguity, meaning, error, contradiction, etc., until they became blind to the actual procedures of human reasoning.

Once this was seen, it followed that the only tactics which could possibly succeed would be to uproot systematically this root of all error. But it remained a question whether in so doing it would be expedient to quote chapter and verse and to mention names. Here it is possible that I made a mistake. But it was from forbearance rather than cowardice, and the choice was a difficult one. It was of course evident to me that once the full absurdity of Formalism was displayed, all logicians, and particularly the Formalists, would hasten to disclaim it and to declare that they never held such nonsense. I am not, therefore, surprised to hear from Prof. Hoernlé that this is the line they are disposed to take. They could do this

the more easily and sincerely that they were not fully conscious of their Formalism, and that in point of fact none of them held to Formalism in the full fatuity of its extreme rigour; I knew they had all somewhere or other made (inconsistent) concessions to what they *ought* to have excluded as 'psychology,' in order to get any content into their 'logic' at all. Nevertheless to mention names seemed the worse alternative. For this would only enable the Formalists to turn the issue into a personal one, and to smother scientific discussion under a cloud of personalities. The history of the pragmatic controversy constituted an eloquent warning on this score. So I thought it wiser and fairer to be strictly *sachlich*, and to aim only at showing how from the fundamental abstractions embodied in the Formalist conception of logic are derived all the doctrines of the traditional logic, and how from these again descend the essential positions of the logicians who are called 'modern,' but have advanced so little beyond the ancients that it is still possible to make 'back to Aristotle' the watchword of a logical 'reform'. I thought also that they and their followers would be familiar enough with their chief doctrines to recognise them even under the label 'Formalism,' or that at any rate this would become plain in the resulting discussion.

But if Prof. Hoernlé demands still more explicitness, I need not scruple to assure him that his 'suspicions' (p. 106) are well founded, and that I meant to include in my strictures all the essential positions of all the 'modern logicians'. Indeed I do not think that any doctrine that is of real importance has escaped me, nor that I have criticised a single doctrine which is purely antiquarian, and is not to my certain knowledge (acquired *inter alia* by examining) actually taught by professors of Logic. And though Prof. Hoernlé does not mention all my objections, I believe that those I have urged are all of a vital and fatal character. I have also endeavoured to state them very clearly and simply, in order that it might be difficult to pass them over in silence, as was done when some of them were put (in somewhat different forms) by Mr. Alfred Sidgwick and by Prof. Dewey. But I am not unduly sanguine as to the result. For the worst of making out an unanswerable case is that no one in fact tries to answer it. Nor, unfortunately, does it follow that because a superstition or an error has been driven underground and has nothing to say for itself, it ceases to be believed, or even to be propagated. The belief in witchcraft and magic still flourishes, and there will be believers in Formalism so long as there are people who do not understand the use of language. Logicians moreover know quite well that their craft is so entirely artificial and so utterly divorced from the labours of scientific inquiry that they can make any sort of nonsense good and orthodox 'logic' by continuing to set questions on it.

(2) Such then were my main reasons for calling the false logic 'Formalism'. And Prof. Hoernlé could have made my tactics clear

by calling more attention to the fact that I had previously extended the connotation of 'Formal Logic'. I did *not* restrict 'Formalism' to the attempt to treat of 'forms of thought' *per se*, but defined it in addition by its beliefs that 'formal validity' is a possible object of logical contemplation, that material truth may be taken for granted, and that the particular matter of actual reasonings may be treated as irrelevant without risk. I was so anxious to make this clear that I repeated my definition of 'Formal Logic' in several places (pp. ix, 6, 374), and its comprehension is essential to that of my argument. The notion that Formalism, *as defined by me*, is no longer advocated, is thus disposed of; Prof. Hoernlé's 'suspicion' (p. 105 *s.f.*) that I regard 'Formalism' as vitiating (nearly) "all contemporary logic" is more than well-founded: it is the very point I insist on as strongly as possible.

(3) Prof. Hoernlé, therefore, might fairly have gone on to point out that the issue between the humanist and the current logic might be narrowed down to a question as to the nature of *meaning*. This is in form a new question, because 'logic' has not hitherto treated meaning as having any relevance to the theory of thought, though it has implicitly made certain assumptions about it. We must ask, therefore, explicitly—Is meaning a matter of (psychical) fact, or of words? If it is the former, we gain an impregnable starting-point for humanist logic (or 'psychologic'), from which my whole condemnation of 'Formalism' follows, simply because Formal Logic manifestly presupposes a total abstraction from meaning, and is by definition meaningless. If it is the latter, verbalism becomes the essence of 'logic,' which will be concerned henceforth neither with thoughts nor with things, but only with words. It follows (*a*) that 'logic' has, in principle, nothing to do with human thoughts, and that to describe and guide the latter some new discipline must be devised. This corollary might be quite acceptable to 'Symbolic' logicians, were it not that they are hit in another way. It is clear (*b*) that as *all* words may be used in different senses and for different purposes, all are (infinitely) 'ambiguous'. Hence, even though 'meaning' is taken to inhere in symbols, it is futile to contrive a 'symbolic logic'. For every sort of symbol (and not words alone) will become 'ambiguous,' because it can be used to convey a plurality of meanings, as *e.g.* '+' may mean an operation or a direction or a state (of electricity); nor can any definition ever be rendered unambiguous and 'predicative,' because all the words it uses are ambiguous, and whatever attempts are made to define them, the terms of every further definition will themselves be found ambiguous *ad infinitum*. It becomes impossible, therefore, to construct symbols unambiguous absolutely and in principle, and the ideal of Symbolic Logic, to *fix* meanings and to achieve a 'one-to-one correspondence' between them and their symbols, becomes a chimera.[1]

[1] In the end, therefore, it will be found both simpler and more practicable to adopt the remedy for 'ambiguity' proposed by the humanist

It seems to me, therefore, that the question of meaning is eminently one on which logical discussion should be concentrated, though it is not easy to predict what views Formalists will improvise on a fundamental conception which they have ignored for so many centuries, and so radically that most languages have not even a word for it. But they might begin by considering the paradox, proved on the authority of Prof. Stout and Miss Jones, that their version of the 'law of identity' makes it incompatible with significant assertion and bases logic on an unblushing abstraction from meaning, and endeavour to explain why they think it a 'necessity of thought' to exclude significant assertion (*cf. Formal Logic*, ch. xxiv., § 5, 6).

(4) Prof. Hoernlé's demand for the speedy promulgation of a humanist logic, on the other hand, must, I fear, for the present be regarded as an invitation to irrelevance. For if the human mind is ever to find its way through the mazes of logic, it must concentrate on one thing at a time. It must understand clearly where it has gone wrong and why, and grasp in what direction it must move to extricate itself. Otherwise it will simply relapse into its old errors, the speciousness of which is attested by the struggles of 2,000 years. Nor will there be any desire to break with the hallowed formulas that have done duty so long, unless they are clearly seen to be untenable. Until these conditions are fulfilled, the preaching of a logic of real knowing will fall upon deaf ears.

There is not, moreover, any necessary connexion between the discarding of the old logic and the establishment of the new. Even if the success of the latter should exceed my confident expectations, it would only ratify the condemnation of the former on the specific charges brought against it. If it is true that the old logic is misleading, inconsistent, false, meaningless, and much worse than useless, nothing can rehabilitate it. Even, therefore, if it should prove impracticable to reconstruct logic in a generation, and humanist logic should not at first give universal satisfaction, its prospective defects could not exonerate Formal Logic, and ought not to save it.

Not that I believe the new logic would be a failure: I have explored it sufficiently to feel sure that it will be a success. Nor can I take so despondent a view of the capacity of philosophy as to dispute that logicians by labouring at a logic of real thinking will achieve something very distinctly superior to Formal Logic. On the contrary, it ought to be quite easy to do this in much less than

logic, *viz.* to find out *in each case* what the parties to a discussion *actually wish to mean* by the terms they use, and to stop the dispute until they understand each other and agree to use them in a common sense. At present philosophic disputation is so inconclusive and unprofitable, because so little care is taken to make sure that there is any common ground to fight on.

2,000 years. Indeed, I believe that to a considerable extent it has been done. Readers of the preface to the second edition of my *Humanism* will not need to be told that the foundations of the new logic are now laid, while an attentive reader of *Formal Logic* may pick up a good many more constructive hints than Prof. Hoernlé has found space to indicate.[1]

What is not, unfortunately, at present in existence is a systematic treatise on the new logic. This, I admit, it would be a great convenience to have; but systematic treatises are not producible in a day. The mere labour of composing them is great, and in this case there is also so much exploration and path-making through the obscurities of virgin forest demanded that the undertaking is bound to be very formidable. Nor is it rendered easier by the present temper of most philosophers; so long as they cannot (or will not) perceive the defects of the old logic, are they likely to relish the advantages of the new? Has not our generation already offered them far more novelties on every side than they can digest, and vastly more than they find palatable? The Eternal Verities, in short, have been so hustled that they have quite lost their breath, and must be given time to recover their face.

If, however, Prof. Hoernlé insists on thrusting upon me the ungrateful function of labouring for posterity, I must plead for a respite and beg him to take into account some of the practical difficulties—the scantiness of a professional teacher's leisure, the necessity of adjusting one's teaching to the questions set in examinations, the impossibility of finding even the names of the leading topics of the new logic so much as mentioned in the indices of the old. Lastly, if a teacher publishes books on the staple subjects of all his lectures, what, pray, is he to lecture on? Those who believe they have something to say will always endeavour to publish, but the organisation of our English academic life penalises them terribly.

(5) Nevertheless I will endeavour to answer briefly Prof. Hoernlé's three questions on page 108. (*a*) He asks "whether a logician can ever know fully the context and purpose of any thoughts but his own?" The answer is 'probably not,' and probably not even of his own, if by "know fully" is meant "know with absolute certitude". But why should this uncertainty prompt him to omit the context, purpose and meaning of thoughts altogether, and prevent him from trying to know them as 'fully' as he can?

Prof. Hoernlé asks (*b*) "whether there are not in the psychological context many elements which are *irrelevant* to the thought of the moment?" The answer is 'probably, but there can be no *formal* certainty as to *what* they are'. Whoever appeals to the notion of irrelevance, does what we all do in real thinking, and

[1] I may mention, *e.g.*, the account given in ch. xx. of the real function of Causality.

does right. But *he takes a risk*, and I have shown that this is as abhorrent to Formal Logic as it is essential to real thinking.

Lastly Prof. Hoernlé asks (*c*) "Whether there is not much thinking so called which the logician is perfectly entitled to neglect," and thinks that I should answer 'Yes,' because I deny that most (? all) of what Formal Logic calls thinking is real thinking at all, but infers that if so I too must recognise some thinking which is not conditioned by a doubt and a problem, because it aims merely at 'rehearsing systems of established truths'.

I must, however, point out in reply that there is not, and cannot be, any real thinking which is not relevant to a doubt. Even so well-established and endowed a truth as the multiplication table is not 'rehearsed,' unless there is need for it. Prof. Hoernlé would not regale his *confrères* with it; he would rehearse it only if he had to teach it, and then *ex hypothesi* he would do so for the benefit of persons who did not yet know and accept it. So no real thinking can be pronounced irrelevant *a priori*. I am not denying (but rather insisting) that in our actual thinking we always assume that much in the circumstances is irrelevant for our purposes, and are usually right. But there is always a risk, and the process cannot be made 'formally valid'. If, then, Prof. Hoernlé means by "perfectly entitled" that the logician goes on absolute assurance and attains to formal validity in his reasoning, I must respectfully dissent.

(6) Lastly I may explain that my polemic against the second abstraction which, as Prof. Hoernlé points out, I contest throughout (p. 107), *viz.*, that from what logicians call 'psychology,' when it is inconvenient to take it into account, but unblushingly take refuge with, when their verbalism excites protests or the inadequacy of their verbal analyses is detected (as by Dr. Mercier), had not merely a critical, but also a constructive, aim. It is true enough that if the 'matter' of thought cannot be abstracted from because the meaning of the thought cannot be abstracted from, and the meaning resides in the mind of the person who thought and meant it, and changes if the 'form' is used to convey another meaning of another person, the way to undo the false abstraction of Formalism is to take account of this personal meaning; but it follows also that a logic which takes account of real meaning *must* be humanist in principle. Hence the argument which confutes Formal Logic also establishes in its place the fundamental assumption of Humanism, and vindicates my original conception of it as essentially a reform of 'logic'.

F. C. S. Schiller.

THE 'WORKING' OF 'TRUTHS'.

Dr. Schiller complains[1] that in my note on the dictum "All truths work," I have dogmatically asserted a 'refutation' of Pragmatism without any attempt at proof. My aim, however, was much more simple. I wished merely to call attention to the fact that unless the dictum *were* simply convertible it failed to provide a criterion, and it can hardly be denied that it is the special boast of Pragmatism to supply such a criterion.[2] Dr. Schiller's reply, therefore, does not seem to meet the difficulty.

Before dealing with this point it may be well to say a few words in answer to Dr. Schiller's strictures.

(1) It may be admitted that the conversion is *invalid*, but it is nevertheless—as I shall try to show—essential to the theory.

(2) I am unable to inform Dr. Schiller of the demise of the last philosopher who denied that there was *any* connexion between 'truth' and 'satisfaction' since I am not acquainted with any who have denied, to repeat my own words, that "truth" is "satisfactory from some point of view". The philosopher whom Dr. Schiller most loves to attack as the representative of "Intellectualism" (Non-Pragmatism?), Mr. Bradley, certainly does not deny it, for he holds that truth must satisfy the intellect,[3] and even goes so far as to suggest that in so doing more will be involved than merely *intellectual* satisfaction.[4]

(3) The criticism passed on the two passages I selected from James may be briefly noted. With regard to the first, Dr. Schiller admits that I drew from it no more than it offered. The second he objects to on the ground that it represents not 'James's own view' but Dr. Schiller's. This, however, cannot be held to make any difference, for, on the preceding page, James had said "Schiller's doctrine and mine are identical," and it did not seem essential to

[1] Mind, N.S., 84, pp. 532-535.

[2] *Cf.* Schiller in article cited: "let no man imagine that he has a theory of Truth unless it *does* distinguish True from False" ("Error," *loc. cit.*, p. 145).

[3] See *Appearance and Reality* (2nd ed.), p. 610.

[4] I am happy to find a confirmation of this view in Prof. Bosanquet's recently published *Gifford Lectures* (p. 53 n.): "I will commit myself to saying that all we need to overthrow the latter [*i.e.* Pragmatism], or to make it a truism, is to be allowed to argue upon the nature and conditions of satisfaction".

point this out. This then is irrelevant to the point at issue. It may be, further, that this is an analysis of how people *do* think, and not how they *ought*, but James says that it is "because he (Dr. Schiller) seeks only to tell us how truths are attained, not what the content of those truths, when attained, shall be," and it is surely evident that Dr. Schiller thinks they are attained by 'working' and are true *because* they work.[1] Even if it be granted that for an individual truth is determined by satisfactory working, the further contention that it is the essence of truth so to work cannot be maintained.

I cannot admit, moreover, that I am unable to distinguish between the logical and the psychological attitude. It is naturally impossible to convince Dr. Schiller of this, seeing that he has long been under the impression that none but a pragmatist is able so to distinguish, but may I point out that this statement is a clear *non sequitur ?*

Dr. Schiller accuses me of offering only 'dialectics' in support of my contention, and protests that the phrase taken from his writings is "*not* a statement of pragmatic *doctrine*," but a description which shows that actual practice conforms to the theoretic analysis of Pragmatism. But I note that he contents himself with a reiteration of his denial that 'working' is not sufficient to establish truth. I am of course quite aware that Dr. Schiller has "*never* imagined that a desire to have a thing true sufficed to make it true".[2] Am I not desirous of reminding the critics of Pragmatism that such an explicit assumption is denied by Dr. Schiller's own statement? Has he not, as I pointed out, condemned as "grotesque" the assumption that 'truth' and 'working' (usefulness ?)are coextensive? His remarks on page 533 have, therefore, no bearing on the point.

For my point is this. Either Dr. Schiller must assume the conversion in question, or Pragmatism fails to provide a criterion. Now it is instructive to note that Dr. Schiller's whole argument is directed towards showing *why* this conversion is, as a matter of fact, materially, as well as formally, invalid, and we may certainly agree with him that the reason is obvious. To say then that

[1] See *Humanism* (p. 59): "Truth is the useful, efficient, workable, to which our practical experience tends to restrict our truth valuations". Dr. Schiller admits that "Truth . . . to be really safe has to be more than an individual valuation; it has to win social recognition," but "the use-criterion selects the individual valuations, and constitutes thereby the objective truth which obtains social recognition". In other words, what receives *social* recognition as 'useful' is 'true'. *Cf.* James, *Pragmatism* (p. 218): "Our account of truth is an account of truths in the plural, of processes of leading realised *in rebus*, and having only this property in common that they *pay*". But if truths have only one property in common surely that property must be of the essence of truth, and cannot belong to anything that is not true.

[2] *Loc. cit.*, p. 533.

"pragmatists have always understood both the methodological nature of postulates, and been only too painfully aware of the vogue of errors and lies,"[1] is merely to evade the point of my criticism. I am quite willing to admit that Dr. Schiller insists upon the vogue of errors and lies. (Do they not afford a basis for his jokes that the intellectualist as such cannot understand?) Nor do I wish to conceal the fact that he distinguishes "eight different sorts of 'truth-claim' or formal truth," only two of which are 'validated'. Is it not my whole contention that *in so doing* Dr. Schiller is inconsistent? Consequently I am astounded to find that Dr. Schiller thinks that he has disposed of the matter when he says, '"To distinguish these 'truths' from those other 'truth-claims' which satisfy some purpose but are found not to be 'true,'" is not therefore either a difficulty to me, nor one I have failed either to observe or to discuss,'[2] for *what*, I ask, is to distinguish these 'truths' from those other truth-claims if not the fact that truths 'work' and *nothing else does?* For I fail to see how any property can be a criterion unless it belongs to every instance involved and to these only. What other meaning can a criterion have? In stating that 'working' belongs not only to all truths but also to some things that are not true Dr. Schiller destroys its force as a criterion.

In other words, the point of my criticism lies in the sentence "If from the fact that 'all truths work,' it does *not* follow that 'all that works is true,' then 'working' can *not* be regarded as a *test* of truth,"[3] and this point Dr. Schiller merely ignores.

For, finally, I cannot regard his remarks under heading (5) as an answer, for I ask in *what* sense does the pragmatist provide a *criterion?* Dr. Schiller suggests that I shall endeavour to defend myself by contending that the pragmatist does not offer a test of truth *in my sense.* I do not ask him to do so. I deny that he has offered a test *in any intelligible sense of the word 'test'.* Dr. Schiller seems to suppose that his opponent claims to *know* an *absolute* truth which is not corrigible. We claim only that it is the *nature* of truth to be incorrigible, and no 'truth' that requires "further improvement" is quite 'true'. Hence we may agree with him that "an old truth may always prove inadequate, and may have to be condemned as 'error'"[4] provided that it be recognised that such 'truth' was falsely so called.[5]

I am quite ready to admit that no "intellectualist" philosopher has produced a criterion. But I cannot admit that it is either

[1] *Loc. cit.*, p. 534. [2] *Ibid.* [3] MIND, N.S., 83, p. 471.
[4] *Proc. Aristotelian Society*, N.S., xi., p. 159.
[5] The point is that the pragmatist asserts that what was 'true' at one time may cease to be true, whereas his opponent asserts that what appeared to be 'true' at one time may be found to be inadequate, hence *not* 'true'. The difference is vital from the point of view of the nature of truth, and raises the whole question as to whether truth is mutable.

possible to do so, or necessary as a preliminary to the discussion of the *nature* of truth, for the latter is logically prior, and it is owing to his confusion of the two very different questions of the nature of truth and its criterion that the pragmatist falls into the double error, first, of supposing that he has found a criterion, and secondly, of offering this criterion as an account of the nature of truth.

Is not the absurdity of proffering "a formal definition of truth which includes 'error'" surpassed by the absurdity of proffering a *criterion* of truth which fails to *distinguish* truth from error?

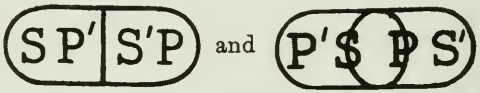
L. S. STEBBING.

INVERSION AND THE DIAGRAMMATIC REPRESENTATION OF NEGATIVE TERMS.

It is a pity that, in discussing the subject of Inversion in Mind, N.S., No. 83, Dr. Hicks left out of account the handling of the subject by Dr. Keynes. Even though he be one of the "inversionists" at which Dr. Hicks's article girds, there is no mention of his solutions of various of the problems raised, solutions within their limits quite conclusive and not themselves refuted by Dr. Hicks.

I refer principally to Dr. Keynes's use of the two additional figures

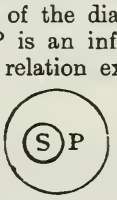
Fig. 6. Fig. 7.



to illustrate the possible relations of the extensions of terms. (Keynes, *Formal Logic*, 3rd ed., pp. 140 *sqq.*)

If an E proposition can be illustrated by Fig. 6, then S'*o*P and S'*i*P' are not inferences from it. If O can be illustrated by both Fig. 6 and Fig. 7, and I may be illustrated by Fig. 7, then there is *no* inverse of either I or O.

Now the presupposition of Dr. Keynes's scheme and of the possibility of inversion is that S, P, S' and P' all are existing extensions, that consequently the two new diagrams are necessary, because, S being excluded wholly or partially from P, it is possible that the whole extension S' may be included in P. But in his article in Mind, Dr. Hicks does not challenge the usefulness of this assumption and the legitimacy of the added figures.

A further criticism on Dr. Hicks's article is that he calls one proposition an inference from another when the second is derived from only one of the diagrams representing the first. Thus, he says that S'*i* P is an inference from S*a*P because the former is true when the relation expressed by S*a*P is to be represented by Fig. 1, *viz.*: 

while it cannot be extracted from the relation represented by Fig. 2, *viz.*:

.

Now if this were so, then, *e.g.*, an affirmative conclusion in the second figure of the syllogism would be an inference because in certain cases it is true at the same time as its premisses.

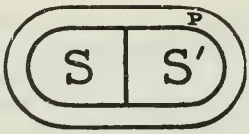
There are, therefore, only four valid inverses, S′*o*P and its obverse from S*a*P, and S′*i* P and its obverse from S*e*P. Criticism of these must not be based on a misrepresentation of the diagrammatic scheme which they express, and it is apparent that a further criticism made by Dr. Hicks does imply such a misrepresentation. Thus he justly derides the inference from 'No mathematician can prove that $2 + 2 = 5$' of 'Some non-mathematicians can prove that $2 + 2 = 5$'. But inversion only holds where the extensions of all the terms S and S′, P and P′ coexist in the same universe. Now 'able to prove that $2 + 2 = 5$' being a predicate of nothing real, can hardly have an extension existing in the same universe as mathematicians! In fact, it would be safe to say that its extension does not exist in the universe at all. Take any nonsensical predicate and deny it of a term universally, then it will hold of some part at least of the extension of the opposite of that term. Thus from 'No vertebrates breathe the cube root of 47' we shall have 'Some non-vertebrates do breathe the cube root of 47'. But then the predicate has really no extension, and we cannot consider it in our diagrammatic scheme.

There are, however, further objections to the use of inversion hitherto not touched upon. Take such an A proposition as 'All the combatants were killed'. Then we infer by inversion that 'Some non-combatants were not killed,' *i.e.*, S′*o*P. Now the contradictory of this S′*a*P 'All the non-combatants were killed' seems a statement quite compatible with S*a*P 'All the combatants were killed'. In a general massacre both would be facts. Therefore the inverse S′*o*P must after all be invalid.

The difficulty, if any one feels it, is entirely due to an ambiguity in the use of negative terms. The negative term which is the subject of an inverse is an 'infinite' term between which and the positive S the whole of the universe is divided. That is to say, 'non-combatant' the subject of the valid inverse S′*o*P really covers everything else in the universe that cannot be described as a combatant, and it is quite easy to deny the predicate 'killed' of multitudes of such things. But when we really use the term 'non-combatant' we do not mean this infinity of heterogeneous objects; we mean by S′ a *restricted* contradictory. S and S′ are exclusive and exhaustive divisions only of a more or less definite genus or group, the members of which are united by some common nature. At this time of day it is unnecessary to labour the contention that the negative term of actual thought is a limited contradictory, and therefore has a positive value. The invalidity as inferences of all the inverses we actually use is a necessary consequence, as may be

seen from the use of diagrams. S and S′ may be the subdivisions of a group S + S′ which lies wholly within P.

Thus



The predicate also will have a limited contradictory. But when we try to take this into consideration, in our scheme of diagrammatic representation, we see how intricate and consequently useless all such schemes must be. Mathematicians will be able to tell us how many possible arrangements there are of S, P, S′ and P′ consistent with each of the four logical propositions when S and P and their contradictories are all finite quanta; examination of a few will convince us that when any SP proposition is true there may be any sort of logical relation between S′ and P and S′ and P′.

The fact that the negative terms of thought are in extension finite quanta does more than vitiate inversion, it also affects the obversion of negatives. For example, we cannot infer from 'no plants are vertebrates' that 'all plants are invertebrates' unless we mean by 'invertebrate' an infinite term. The obversion of an A proposition is not, however, invalid. If all S *is* P then S, being excluded from the infinite field which is not P, is excluded from any definite P′ which that may contain. The invalidity of the obverse of an E proposition might have been brought forward as the cause of the invalidity of inversion, as all inverses are reached through the obversion of an E proposition of some kind.

It is true that the obverse of E, the obverted contrapositive of A and even the inverse of both often appear natural inferences, *i.e.*, their truth seems to be guaranteed by the truth of the proposition from which they are derived. Thus from 'All vertebrates have a brain' it seems natural to infer 'All animals without a brain are invertebrates' and also 'Some invertebrates have not a brain,' from 'No birds are viviparous,' 'All birds are non-viviparous,' from 'No men are truthful,' 'All are liars'.

But in every case our obversion of E depends upon something more than the truth of that E and the law of excluded middle. Since we are using vertebrate and invertebrate as limited contradictories, we require to know that 'all animals (without or with a brain) are either vertebrates or invertebrates before we can infer that 'All animals without a brain are invertebrates'. It was because we could not make a corresponding disjunction about plants, that the obverse of 'No plants are vertebrates' failed.

The result of this investigation might be expressed in the case of inversion by the maxim that 'the inverse when valid is valueless

and when valuable is invalid'. This agrees with Dr. Hicks's conclusion, but for a different reason. In addition I claim to have shown that not a single universal inference in which S′ appears *either as subject or as predicate* is valid. This is rather a pity, for pure thought, *i.e.* the kind cultivated by the old hermit of Prague, would like, with the aid of the law of Excluded Middle alone, to chisel out all sorts of obverted contrapositives and converses from statements about that hopeful and numerous class of terms that have opposed to them a finite contradictory. But really these prove as intractable as *infimæ species* which, being substance, 'have no opposite'.

G. R. F. Ross.

IS INVERSION A VALID INFERENCE?

In his discussion of Euler's Circles and adjacent space, in the June number of Mind, Prof. Hicks questions the validity of inference by the process of Inversion. After making a list of all the inverses—twenty-two!—from the four typical propositions A, E, I, O, he says: "Even the most ardent advocate of inversion is not willing to stand sponsor for more than four of the twenty-two inverses given above". I wish to stand sponsor for them all.

In this and other discussions [1] of the subject, Mr. Hicks seems to me to be labouring under a grave misunderstanding as to the essential nature of an immediate inference. An inference is immediate not because it is obvious or direct or is grasped in a single pulsation of consciousness. It is immediate, no matter how many so-called steps are required to reach it, provided no other term or information is employed than what is given in the original proposition. Now it is this ancient question of the precise determination of what is implied in a proposition and what is extraneous matter that is the cause of the difficulty which Mr. Hicks finds insuperable in the transformation called Inversion.

Ever since the days of Aristotle logicians have noted the embarrassing fact that propositions are not always univocal in meaning. The "Inversionist" therefore simply insists that when you give him one of these ambiguous propositions to operate upon you shall announce beforehand in which one of the several meanings he is to take the proposition. However, it must be observed that this task of fixation of meanings belongs properly to the one who states the proposition in the first instance. If he does not *fix the meaning* the Inversionist must not be blamed for drawing his inference from the proposition in the form of hypothetical alternatives corresponding to the alternatives implied in the original proposition.

No logician of any standing has ever claimed universal categorical validity for the process of Inversion. Keynes, who was the first to give a comprehensive discussion of this subject, certainly did not. In chapter viii. of his formal logic he most carefully pointed out the limitations of Inversion. Again, Welton says: "An inverse from a true proposition is not necessarily true when stated categorically.

[1] *Journal of Philosophy, Psychology and Scientific Methods*, vol. ix., pp. 19, 521.

. . . It is thus seen that these immediate inferences are of extremely small importance. We give them chiefly for the sake of completeness." [1]

But granted that Inversion is a process that sometimes yields a "doubly-conditional hypothetical conclusion," this does not destroy the practical value of these inferences in the world where Mr. Hicks says we find "the proof of the pudding". Why does Mr. Hicks object so strenuously to the "pesky ifs"? Language is brimful of them, and if they did not correspond to something concrete and practical they would have been eliminated long ago. In the business of narrowing down the complexities of alternatives which we meet everywhere in the world of experience, we do not wait until we have achieved certainty. In our search for truth it is greatly worth while to be warned away from error by the destruction of hypotheses one at a time. My stenographer says: "Have we any more rubber bands?" I reply: "*If* there are any, they will be in the box in the second drawer from the top". Now the "ifs" to which Mr. Hicks objects are valuable in precisely the same way.

Mr. Hicks is labouring under the prevalent delusion that formal logic is a collection of rules which furnish guidance of a positive character in the search for truth. But not even its most enthusiastic votaries have claimed that it is an Organon of knowledge. It is only by keeping men from going astray, by warning them away from error, that formal logic helps them in their efforts to reach truth. The Inversionist does not, as Mr. Hicks asserts, attempt the absurdity of proving *foxes do not bark* from *all dogs bark*. He merely says that he can warn you away from error in your quest for an animal that does not bark. You tell him that in your search for an animal that does not bark, you have discovered that all dogs bark. Then he tells you categorically that you must not look for the animal that does not bark among dogs, but *if* you are to find it at all *it will be somewhere in the region of beings that are not dogs.*

Then as to the inverse of the "E" proposition: Mr. Hicks declares that the Inversionist perpetrates the absurdity of inferring from "no mathematician can prove $2 + 2 = 5$," that "some one who is not a mathematician can prove that $2 + 2 = 5$". This would, indeed, be "inversion silliness," as Mr. Hicks says. But here again, the real function of Inversion is to warn you away from error. You set out in search of some one to prove $2 + 2 = 5$. Having discovered that no mathematician can perform the feat, you announce this to the inversionist, who thereupon replies: "If that is so and you still persist in your search, I can tell you most positively that if you are to find anybody who can prove that $2 + 2 = 5$, *it will be some one among those who are not mathematicians*".

C. H. Rieber.

[1] *Manual Logic*, p. 305.

VI.—CRITICAL NOTICES.

Wissenschaft und Philosophie: ihr Wesen und ihr Verhältnis. Von Dr. Paul Häberlin, Privat-Docent an der Universität zu Basel. Erster Band: Wissenschaft. Basel: Kober C. F. Spittlers Nachfolger, 1910. Pp. 360. Unbound, M. 6; bound, M. 8.

The author of this book attracted favourable attention, some years ago, by a critical work on Herbert Spencer's Philosophy. He now gives us what is intended to be a constructive effort, a positive piece of 'Weltanschauung,' though this first volume is still merely preparatory. It attempts to clear the ground, by a discussion of the nature of 'Science,' for the discussion of 'Philosophy' which will presumably follow in the second volume.

The author's problem is the possibility of Philosophy considered as 'Weltanschauung'. Is it worth while to seek, in our day, for a comprehensive philosophy of life? Can we embark on such a quest with any hope of success?

This problem is for Dr. Häberlin, and must be, as he rightly pleads, for all philosophical natures, always a *personal* problem. There is no genuine 'philosophising' except by those who—themselves 'microcosms of culture'—are intensely sensitive to all the conflicts and discords of life, to whom these conflicts become personal problems, contradictions which they feel within themselves, from which they suffer spiritually, which drive them to seek release, reconciliation, harmony. Philosophy, for such as these, is the striving for the truth which will reconcile, for the insight and understanding which will bring peace. It is the search for the firm πού στῶ whence the conflicts in self and world are dissolved into harmony, thorough-going and all-inclusive.

Such, according to Dr. Häberlin, is the function which Philosophy must fulfil if it is to have any function in our lives at all. Yet modern philosophers seem to shrink from the task. Few have Hegel's supreme confidence in attempting it, few profess the faith that the wounds of reason can be healed by reason alone. There is a sceptical prejudice abroad against the all-inclusive systems of the great masters. Their failure is tacitly held to show that the riddle of the Universe is insoluble, and that its solution, therefore, is not worth attempting.

And thus ours is a day when most men work piecemeal on isolated problems. And yet, granted that no 'system' yet formu-

lated, or likely to be formulated, can claim finality, does it follow that the quest of the ideal is useless and worthless?

A writer who sets himself this problem deserves a hearing. How far, then, does Dr. Häberlin, in this volume, take us towards an answer?

He begins by distinguishing two 'types' or methods of philosophy, *viz.*, the 'metaphysical' which seeks for an 'absolute' truth transcending in a measure the partial truths of our human experience, and the 'scientific' which clings closely to the basis of experience. Taking the latter first, we reach the preliminary problem: What is the nature of Science? (p. 20). To this problem the present volume is devoted.

'Science,' in the first place, is taken to mean, not the aggregate of 'facts' and 'theories' established by the 'sciences,' nor again the collective body of these sciences, but the *living activities of research and inquiry* as conducted by scientists, individually or in co-operation. It may be described as that conscious mode of activity or conduct (Handeln) which aims at scientific knowledge (Erkennen). What then is 'knowing,' and under what conditions does it become 'scientific'? Now all 'knowing' is a mode of 'Erleben,' which term here bears exactly the same sense as does 'experience' in Mr. Bradley's 'reality is experience,' *i.e.* it covers every form and variety of conscious process. 'Erleben,' then, is the starting-point, and proceeding in a manner reminiscent of Descartes' *cogito, ergo sum*, Dr. Häberlin declares 'Ich erlebe' (I am experiencing) to be the most comprehensive and fundamental assertion we can make. It is an assertion unique and self-evident, needing no proof, for it is established in the very attempt to deny it and its contradictory is unthinkable. Further, the subject (I) and the predicate (am experiencing) are said to be exactly co-extensive, which—unless I have misunderstood the author—means literally that the Ego and its experience (including what is experienced) are coincident (p. 25). This is supported by a later passage (p. 34) where the author refuses to distinguish between an 'activity' of perceiving and a 'content' perceived: 'Im Sehen ist das Gesehene eingeschlossen'. The experience of perceiving a sheet of paper is not made up of, or analysable into, two elements, the seeing and the sheet, but is an indivisible unity which may be indifferently expressed as my-seeing-the-sheet or as the-sheet-seen-by-me. In the form stated, the principle applies only to 'sense-perceptions'. How far the author would be willing to extend it to other cognitive experiences, *e.g.* to thought as distinct from perception, is not quite clear. At any rate, so far as the principle goes, it is clearly a modern restatement of Berkeley's view that for the 'Ego' *esse est percipere*, and for the 'object' *esse est percipi.* Or, to put it in more modern language: reality is experience, where the distinction of subject and object is taken to fall *within* experience. This is clearly stated in a later passage (p. 149): 'Die Welt (im Theoretischen Sinne) *ist* eben das

Erkennen'. If we are entitled to argue from these passages, the volume on 'Philosophy' may be expected to give us an 'Idealism' on this basis.

Coming to details, we are told that scientific cognition is a mode of *Erleben* which must be 'waking,' not 'sleeping'; it must be 'conscious' (*bewusst*), which is explained to mean reflective or organised 'by intellectual categories'; and it must be 'theoretical,' not 'practical' or 'emotional'

Next, theoretical experiences are said to be of two kinds, sense-perceptions and images or reproductions—'primary' and 'secondary' cognitions, to use the author's terms. Two long sections (pp. 35-117) are devoted to the discussion of these two kinds of cognition. I pick out the chief points: (1) Every perception is declared to be capable of exhaustive (*restlos*) dissolution into a complex of sensations, kinæsthetic and tactile sensations forming the kernel of the complex in perceptions of 'bodies'. Hence the interpretation of the bodily world as a self-contained and independent system, and the consequent copy-theory of truth are both rejected. (2) All secondary cognition, all thinking, is characterised as essentially *imagination*. It consists of, or at least goes back to, images and revivals of perceptions. Of course the author recognises a narrower sense of imagination in which it is rightly contrasted with cognition, but he returns again and again to the more fundamental sense in which all thinking is 'a determinate mode of imagining' ('eine bestimmte Art des Phantasierens,' p. 116) and all concepts are products of the imagination.

The basis of this somewhat startling view is the 'inadequacy' of images, *i.e.* the incompleteness with which they reproduce primary experiences. Thus the materials for our concepts, which according to the author are formed not directly from perception, but only indirectly by comparison of images, are 'inadequate' to start with, and they are further mutilated by the selective and re-combining activity of thought. Hence all secondary cognition is 'Phantasieren' (p. 113), *i.e.* 'a combining of secondary elements which is not wholly adequate to "reality" (= the content of primary experience)'.

Cognition, as a whole, then, is a combination of sense-perception and the more 'adequate' forms of imagination.

Before passing on to the problem of the conditions under which cognition, thus understood, becomes 'scientific,' it may be well to pause for a few words of criticism.

There is a great deal of truth in the importance which Dr. Häberlin attaches, for purposes of knowledge, to the distinction of 'primary' and 'secondary' elements in cognition, provided that the difference between these elements, however we choose to describe it, does not lead us to overlook the presence in both of the same principles of intellectual organisation. Dr. Häberlin does not seem to me to be quite clear on this point. He appears

to underrate—or, at least, he neglects to deal adequately with—the logical structure of perception, which certainly cannot be characterised as 'secondary' in the same sense in which 'images' are secondary. An image, and still more a concept, may not and need not 'reproduce' the sensuous material in full detail at all, but it is valuable for knowledge if it reproduces essential features of the logical structure of perception. One could wish that Dr. Häberlin had followed up the clue of his own earlier phrase about the 'intellectual categorisation' of 'conscious' experience. 'Complex of sensations' cannot be the last word about perception, especially the purposeful, intelligent perception of the scientist. The intellectual organisation of sensations and their investment with meaning is part and parcel, indeed the very essence of, perceptual activity. The 'inadequacy' of images, and generally of memory, matters next to nothing where the relevant primary experiences can constantly be repeated, *i.e.* where memory can be 'refreshed,' thought controlled, theories tested and 'verified' It matters most in the reconstruction of the past, either on the basis of personal recollection, or by inference from records and other data. Yet, even here, too much may be made of the fact that we cannot re-live the past in terms of primary experience.

The exaggeration of the distinction appears also in Dr. Häberlin's remarks about judgment (*Urteil*) which he treats as expressing merely the subsumption or comparison of concepts, or again the subsumption of a particular image under a concept (p. 112). Yet he speaks elsewhere of 'perceiving' *e.g.* a sheet of paper or a tree. Is the 'complex of sensations' here not subsumed under 'sheet' or 'tree'? Can the experience really be equated 'restlos' with a complex of sensations? Or should we not rather treat significant perception as judgment?

The fact that pertinent questions, such as these, can be asked without finding in the book the materials for an answer, would seem to show that these points stand in need of much fuller discussion.

In returning, now, to the problem of 'scientific' knowing, we find the argument continued on the basis of an abstraction which the author himself warns us to treat as provisional, *viz.*, that we can discuss the individual's activity of knowing as if it were wholly uninfluenced by contact with other minds. This assumption is provisionally retained throughout the next two sections dealing with 'Truth and error in individual knowing' (pp. 118-149) and 'The world of the individual' (pp. 149-157). In the former section we hear that for 'secondary' cognition the individual has one single criterion of truth and error, *viz.* agreement with primary cognition (pp. 119 ff.), supplemented, where the appeal to primary experience is impossible, by the 'comparison' of concepts with one another and with the images from which they have been formed (p. 121). The next question (p. 128 ff.), whether the individual can distinguish

between true and false in primary cognition, is answered after a long argument, in the course of which hallucination and illusion of the senses are discussed, to the effect that error in perception is always due to the wrong introduction of 'secondary' elements, *i.e.* it is not so much false seeing but false inference and interpretation of what is seen. This is true, but it follows, *ipso facto*, that truth in perception must be due to correct interpretation and inference, and the author does not appear to have seen that this destroys at once and finally the sharp antithesis of primary and secondary cognition in the way in which he has drawn it.

Throughout the discussion the author constantly hints at the extreme importance of *practical* motives in cognition. However, consistently with his general practice of avoiding alike polemics and quotations, he never quotes directly the pragmatic theories with which he is obviously in sympathy. It cannot be said that these vague allusions to practical influences are very illuminating: they should have been fully worked out, for there is no explanatory magic in the word 'practical' as such. Perhaps the most explicit passage is one in which Dr. Häberlin treats the uniformity of nature as an assumption resting on an act of will (pp. 145-146): we want to be able to trust our knowledge, hence we postulate uniformity. And at bottom it is a will to be faithful to ourselves. 'Die Treue der Erkenntniswelt ist Treue unsers Erlebens, eine Art der Konstanz der Persönlichkeit.' So, similarly, identity is interpreted as an act of faith and will (*Wille zum Sich-selbst-sein*, p. 148). This may or may not be a profound truth; only a detailed working-out of the consequences of this view would enable us to decide. It is much to be hoped that we shall get a full discussion in the next volume, for it is not to be found in this one.

The section on the 'world of the individual' summarises the results reached so far. The 'world' of the individual's cognitive experience, so far as it can by makeshift abstractions be distinguished from the 'world of his imagination' in the narrow sense, and the 'world of his practice,' exists as a phase or mode or part of the totality of the individual's *Erleben*. In primary experience it is given only piecemeal; as a 'whole' it is a concept which includes potentially far more than what has been or can be experienced by the individual in actual primary and secondary cognition. The world, then, which is real for the individual may, as a whole, be defined as the 'possibility of individually true cognition' (p. 152). The result is an extreme and thoroughgoing Idealism (though the author does not explicitly use this label), on the basis of which the author rejects all 'realistic' attempts to distinguish between an existence of the world as experienced or in experience, and its existence in some other form, only negatively determinable as 'existence-other-than-in-experience'. In short, there is no reality except experience: 'Etwas Wirklicheres als das Erleben gibt es nicht' (p. 156).

The next section (pp. 157-174) deals in an interesting manner with the individual's knowledge of other minds and with the complicated way in which the knowledge which others have of him reacts on his own knowledge of himself. Dr. Häberlin accepts the common view according to which the experiences of other minds are known by inference (*Deutung*) on the basis of an analogy between the bodily expressions of experience in myself and others. The inference—not being directly verifiable by primary cognition of other people's experiences—appears to him especially precarious, indeed hardly justifiable on *purely theoretical*, as distinct from practical, grounds. Once the inference has been made, it leads to the distinction by the individual between those of his experiences which are wholly private to himself (*Sonder-erleben*) and those which are similar to, correspond or agree with, experiences of others (*Sociales Erleben*).

At this point, the author appears to have fallen into the error of whittling identity down to similarity, and exaggerating the difference between individual minds to a point at which it becomes unintelligible how they can share in a common world which, as we say, is the *same* for all. His argument for similarity and against identity is an appeal to the principle of the 'Identity of Indiscernibles': 'If there were an identity of experiences, individuals would for the moment of those experiences be identical. Two persons do not see the "same" horse' (p. 166). But this seems a paradox, not required by the author's Idealism. When two men look at a horse, are there two horses or one? When one man speaks to another, do they hear two voices or one? Can the 'same' man look at the 'same' horse twice? Or to adapt Prof. James Ward's more striking illustration: Has it ever happened to the author to be hungry and dispute with another hungry man the eating of the 'same' loaf of bread? Of course there are differences between the experiences of A and B, but the identity of the experiences in respect of the 'same' object may be *known* to be, or—if you prefer it—must be *postulated* to be, more fundamental than the differences. Has Dr. Häberlin forgotten his own remarks about the 'postulate' of identity and the 'constancy of the personality'? Or is he not taking personality in too narrow a sense, when he denies that the experiences of several individuals may, notwithstanding their differences, be identical? Again, the mere fact that the experiences of others are used by the individual to correct and enlarge his own surely demands more than similarity. It seems to be the old insidious fallacy of attempting to conceive identity so as to exclude difference, and of falling back on similarity when the differences cannot be got rid of.

We pass on, at length, to the section on *Scientific Knowing* (pp. 174-201). We have so far, *ex hypothesi*, got individual minds each of which has already learned to make the distinction of 'true' and 'false' in its own cognitive experiences and thus, out of its

own 'true' cognitions, has built up its own 'individual' world. The next step is to recognise that these minds communicate their experiences to one another, and influence one another in such a way that any particular mind always finds itself confronted by a more or less established consensus of cognitions, a social tradition. The establishment of such a consensus depends partly on the intercourse of living minds, partly on the assimilation of the results achieved by previous generations. But as there are endless differences in the ways in which the individual minds perceive, feel, think, recollect, judge, etc., the elaboration of a 'social truth' (*Gruppenwahrheit*, p. 176) out of the mass of more or less conflicting 'individual' truths involves a further 'purification' of the cognitions, which the individual would value as true. Thus certain features in each individual's world are re-valued as a common, universally valid world, the motive for cultivating this intellectual consensus being largely the need of *practical* co-operation in action. No individual's 'world' is entirely coincident with this social 'world,' but it is only when the differences exceed a certain degree and express themselves in practical antagonism that the individual is isolated by public opinion as 'eccentric' or, in extreme cases, by public action as 'insane'. Education and Language are the chief social instruments for securing the assimilation of social truth by each individual mind. A special case of this elaboration of 'social' truth is the establishment of scientific truth by the consensus of the majority of experts and competent judges, *i.e.* of those who are personally engaged in a certain branch of inquiry (p. 179). The mass of the public takes its scientific truth 'on trust' from the experts: it does not know, it believes on authority (p. 182).

It is worth while to point out here—the more so as the author neglects to point it out—that this determination of the nature of science is still incomplete. We have been told, so far, that the individual's 'truth,' as such, is not scientific, for scientific truth is supra-individual, *i.e.* social. But not all social truth is scientific, for much which is widely and commonly accepted is not scientifically true, and again, as Dr. Häberlin explains, much that is scientifically true is accepted by society at large merely on the authority of the experts, *i.e.* the scientists. Science, therefore, is strictly not the social consensus so far as it rests on authority, but only the consensus of the scientists. But this comes dangerously near a circle in definition: scientific knowledge is the knowledge of the body of scientists in society. Or, to put it differently: Dr. Häberlin's arguments show only that scientific truth must be social (or capable of becoming social), but they do not help us to discriminate between social truths, which are and those which are not scientific. The appeal to the expert scientist only shifts the problem a step farther back. What constitutes a scientist? Not, surely, the mere preoccupation with a selected sphere of experience, plants, stars, numbers, etc., but the *motives* and *methods* of inquiry. Hence the author should have warned us that he deals with these matters,

and therefore gives the completion of his account of science, partly on pp. 201-210 and partly in the final chapter of the book on the *Task of Science*, pp. 269-360.

To return to the section under discussion. The remainder of it contains a number of interesting points, among which may be mentioned: (1) the social criterion of truth, *viz.*, agreement with others (p. 183); (2) the fact that, though no scientific knowing can exist except as the knowing of individual minds, yet it requires a rigorous self-discipline, even a sacrifice and a partial 'de-individualisation' on the part of the individual (p. 186); (3) the 'object' or 'world' of science is the whole domain of scientific cognition which is actual now or will become actual in future as inquiry progresses; (4) no primary experiences form part of science, because they are not socially communicable until they have been transformed into secondary experiences (pp. 190-192); (5) hence the 'world' of science is always an 'abstraction,' and it is a fundamental mistake to treat it as more real than the individual worlds, and even as *the* real world *par excellence* (p. 196); (6) and worse still is the mistake to hypostatise this world in the manner of realistic metaphysics and to oppose it to the knowing of individual minds as an 'objective' and 'independent' world. Such a view is a misinterpretation of the 'obligation' to think and to draw the line between truth and error in a certain way. For this obligation, being a feature of our experience, must for this very reason not be turned into an 'independent reality' distinct from all experience (pp. 196-201).

One observation on point (4): To say that 'science does not include primary experience' (= sense-perception) is surely an exaggeration. There is, of course, a sense in which every individual's sense-experiences are private and incommunicable. It is true, also, that communication by language presupposes the conceptual analysis and synthesis of experiences. But there may surely be communication on a perceptual level. Can one person not communicate a perceptual experience to another by *pointing out* the object? Again, where does verification of hypotheses by sense-perception come in on the author's view? Would he banish it from science? Or would he say that the truths established by the 'social' criterion of consensus with others require further to be tested by the 'individual' criterion of agreement with sense-perception? And, if so, is not that part of scientific knowing?

Incidentally, the trouble about identity and similarity recurs (p. 188) where the author maintains that scientific knowing, being individual knowing with a social endorsement, can only be 'similar' in different individuals. Once more, how on these terms is any agreement, consensus, or co-operation intelligible? Unless these words are meaningless, they must refer to identity in experiences of individuals. The alternatives are: chaos, intellectual and practical, or co-operation and organisation on the basis of an identity in differences.

It is not necessary to give an equally detailed analysis of the

second half of the book, which deals with the superstructure built on these foundations. Chapter ii. (pp. 201-268) contains mainly an elaborate scheme of classification of the sciences; chapter iii. a discussion of the most important methodological principles or assumptions of science, such as the nature of scientific 'laws,' Causality, Teleology, Development, etc. It may be noted that on the crucial problem of 'necessity' Dr. Häberlin sides with the extreme empiricists, the modern Humes. He treats Induction as more or less probable guessing on the basis of past experience. To assume and expect that a nexus observed in the past will be uniformly repeated in the future is a risky gamble. The experience underlying causal connexion is nothing but temporal sequence, engendering the *belief* that the sequence is 'necessary' and the expectation that it will hold good in future. This type of view is familiar, and there is no need either to set out once again the obvious objections to it, or to point out its partial truth. It can, I think, be shown that there is more logic in scientific methods than this view would have us believe; and it is not a view which, as far as I can see, is at all made necessary by the author's general analysis of the nature of science.

Looking back on the book as a whole, it strikes one that the author's Idealism should have been argued out with more direct reference to the restatements of Realism in recent Philosophy. But Dr. Häberlin deserves full credit for much freshness and novelty in the details of his treatment. It is valuable to be reminded that 'knowing,' and more especially scientific knowing, is only a special mode of experience (*Erleben*) in general. Again, the relation of the 'individual' and the 'social,' or co-operative, aspects of the activity of knowing has not often been treated as interestingly as by Dr. Häberlin. Most commonly, idealistic theories of knowledge fall back on an abstract 'consciousness-as-such' of which the relation to individual minds is left obscure, or treat individual minds as organs of, or 'moments' in, an Absolute Mind—a solution which raises more difficulties than it solves. In either case, the problem of the actual co-operation (and conflict) of individual minds in the building up of a supra-individual body of truth is too much neglected. So, again, the prevalent view which treats the 'world' of science as a higher type of reality (or as reality more adequately understood) than the world of ordinary thought or, again, of individual experience, has an unusual light thrown on it by the argument that scientific cognition is but a selection out of the total mass of the cognitions of individuals, with the implication that there are stretches of knowing which are not simply crude and inferior science, and 'worlds' which are none the less real for not being scientific.

All in all, there is enough in this book to make one look forward with interest to its sequel.

R. F. Alfred Hoernlé.

Instinct and Experience. By C. Lloyd Morgan, D.Sc., LL.D., F.R.S. London: Methuen & Co. Pp. xvii, 299.

This important work is fundamentally an expansion of the author's contribution to a symposium on *Instinct and Intelligence*, which was held in 1910 at a joint meeting of the Aristotelian and British Psychological Societies and of the *Mind* Association, the papers of the several contributors to which were published subsequently in the *British Journal of Psychology* (vol. iii., pp. 209-270).

It fell to me to open this symposium, and I ventured then to criticise the author for having described the consciousness involved in a chick's *first* peck at food, as *consequent on the act.* "On this one occasion," he had written, "the accompanying consciousness arises wholly by backstroke"; it is "an afferent backstroke from the organs concerned in the instinctive response, and by this backstroke ingoing nerve-currents are conveyed to the higher brain-centres" (*Habit and Instinct*, 1896, p. 135).

From this view I strongly dissented, maintaining that "on the occasion of the chick's first peck . . . the bird is dimly, of course very dimly, conscious of the way in which it is about to act," and that every instinct is characterised by a conative factor,—a specific 'feeling of activity,' of central, non-sensory nature. Lloyd Morgan, on the contrary, had regarded 'impulse' (here, I suppose, equivalent to this conative factor) in instinct as the result of "an afferent backstroke from the incipient innervation of the organs concerned in the response" (*op. cit.*, p. 140).

But these appear no longer to represent the author's views. He now sees "'no intrinsic absurdity in the assumption that, even in the commencement of the first performance of an instinctive action,' there is present some dim and vague pre-perception of the coming development of the instinctive situation" (p. 46). "Provisionally," he says, "I am prepared to admit the possible presence of exceedingly dim, vague, and ill-defined pre-perception of the behaviour that is coming, just before it actually comes" (p. 55). At first he seems to attach little importance to these "provisional" admissions: for such preperception, he maintains, is "so very dim and vague as to be negligible in comparison with the purely reflex tendency to swim . . ." (p. 17). Subsequently, however, he allows that it is "of real value as a condition furthering the instinctive act . . ." (p. 107).

Stout, in his contribution to the symposium, had expressed himself in favour of the view "that even in the commencement of the first performance of an instinctive action, the given situation may be apprehended as about to have a further development. . . . The particular character of the changes only becomes specified as they actually occur in consequence of the instinctive movements which are specifically provided for in the inherited constitution of the animal. The really vital point is, that when they do occur,

they occur as the further specification of something already vaguely anticipated, so that each successive stage of the advancing experience involves not only the apprehension of an actual present, but of a future which has become present." Unfortunately, however, in this connexion, Stout once mentions the word 'object'. Lloyd Morgan at once seizes upon this word, understanding by it a group of sensory data which, though as yet totally devoid of meaning, will acquire it by later experience.

Here we are brought face to face with the author's previous denial of my contention (in the symposium) that "there never can be a beginning of experience—a beginning which has no relation to previous experience". Lloyd Morgan is ever trying to get, as he says, "at the very beginning of experience". It is this unattainable desire which has led him to oust consciousness from instinct, and here to oust meaning from sensory data. It even leads him to look for the moor-hen's *first* experience of sense data, and he finds it when the "chick was struggling out of the cramping egg-shell"! (p. 19). Surely to search for an instinct devoid of consciousness, to search for a sensation empty of meaning, to search for the very beginning of sensation, these are all useless efforts. However "practical" be the purposes of our inquiry, they afford no justification for such procedure. As Ward says in his *Encyclopedia* article,—"Absolute beginnings are beyond the pale of science".

It is clear, then, that as no sensations can ever be wholly without meaning, Lloyd Morgan has no right to style the famous cinnabar caterpillar (for example) as a meaningless object (p. 42), because, at a certain moment, it has not that fuller meaning which it will later have for the animal. From the context it is perfectly clear that when Stout wrote that in the first performance of an instinctive act an animal is cognizant of a perfectly specific object, he was not alluding to the richer, more complete, meaning which a group of sensory data will subsequently come to have. He was merely stating that at the first performance of an instinct the animal in some degrees, however vaguely, feels a new situation different from an older one—which no one, I should have thought, would deny.

But Lloyd Morgan at once asks: "How does this anticipatory meaning originate?" apparently regardless of the fact that Stout had never invoked or implied its existence. All that Stout had demanded was a vague anticipation of change in a felt situation—an anticipation such as might induce not merely a "blind restlessness, but conation in the proper sense as active tendency directed to an end. . . . It is true indeed," Stout takes pains to state, "that the animal will initially have no anticipation of the special means by which the end is attainable or the special form which it will assume."

At this stage, however, preperception appears to have a purely

cognitive value for its author. He expressly says: "I question the presence of any true conation in instinctive behaviour" (p. 43; *cf.* also p. 53). Evidently he is still bound by his earlier conception of felt impulse being purely afferent in nature. Ultimately, however, we find him asking to be "allowed to regard the pre-perceptive consciousness . . . as taking the guise of an undefined interest in what may come" (p. 106)—an expectant satisfaction which in involving "prospective conscious relationship . . . would be so far truly conative" (p. 107).

The ambiguity attachable to the word preperception brings us to the strange way in which the author supposes an animal to learn. He insists that during the first performance of an act intelligence plays no part in the learning process. The animal must wait until the second occasion, when the first experience is reinstated. Not till then does a comparison take place between representation and presentation; whereupon, in some quite unexplained way, the reaction is improved upon. One would have thought that our everyday experience sufficiently demonstrates that we are aware of the imperfection of an act on the occasion of its first performance. Unfortunately it is scarcely conceivable that this awareness can occur in the absence of intelligence; which presents a difficulty for Lloyd Morgan in his untiring search after the 'beginning of things,' etc.,—the start of instinct prior to the dawn of intelligence.

But whatever meaning we prefer to attach to preperception, whatever its form and whatever its importance (which Lloyd Morgan in the end, as we have seen, is disposed to grant). he still insists, almost like the child in "We are seven," that from the physiological standpoint an instinct is nothing but a reflex. It is due, he maintains, to the activity of subcortical processes; whereas the preperceptive consciousness,—whether innate (as he "provisionally" admits) or only acquired by experience,—is the outcome of cerebro-cortical activity. Thus he distinguishes between (innate) "instinctive behaviour" and (innate or acquired) "instinctive experience". According to Lloyd Morgan, from the physiological standpoint it is legitimate to ignore the cerebral activity involved in instinct. ". . . in all cases an instinctive act is, from the biological and physiological point of view, nothing but a reflex. But from the psychological point of view it is always something more than a reflex, in so far as it affords data to conscious experience" (p. 22).

Now the author recognises that an instinctive act is never perfect on the first occasion of its performance. In other words he admits that reflex and instinctive acts are distinguishable. Instincts are capable of improvement by practice, whereas reflexes are virtually unaffected by repetition. Yet, despite this radical difference between the two modes of behaviour, he would reduce them to the same level. In his definition of instinct, from the

physiological standpoint, he puts intelligent (or cerebral) activity out of court. Forthwith he abstracts or (physiologically speaking) he vivisects. After depriving, so to speak, the animal of its cerebral hemispheres, after schematically making a section through the base of the bulb,—he suggests that the spinal activity of the animal is reflex, and that the remaining supra-spinal activities are instinctive.

Physiologically, of course, such a definition will not hold for a moment. There are numerous reactions arising above the cord which are as purely reflex—as inaccessible to practice or control—as any within the cord. In the second place, we know nothing of the way in which instincts are performed in an animal deficient of its cerebral hemispheres. Reflexes in the decerebrate spinal animal have been amply studied; they do not differ essentially in the intact and in the impaired condition. But in the latter state it is, to say the least, highly doubtful whether an instinct preserves its special characteristics; certainly it cannot preserve those enunciated by McDougall. Moreover that same preperceptive consciousness in instinct, which, to my mind, on insufficient grounds, Lloyd Morgan localises entirely in the cortex, he is quite willing to grant to lowly organisms like infusoria. Such difficulties, however, I pass by. The special point I wish to emphasise is that, although granting first that modification by practice is characteristic of an instinctive act, and secondly that preperception plays a valuable part in furthering that act—yet he believes that the physiological point of view permits him to abstract and to ignore these distinctively mental features, to neglect those parts of the nervous system the activity of which corresponds thereto, and thus to classify instincts as reflexes, which are characterised by the lack of these two distinctive features.

How then, according to Lloyd Morgan, do the physiological and psychological points of view differ? How, we may ask, does he come to form two different views of instinct according as he adopts the physiological or psychological standpoint? It is not because he puts consciousness entirely outside the world of science or regards it as epiphenomenal. He expressly states that he accepts "conscious relationships as belonging to the natural order, to be correlated with other relationships, and really counting in any situation within which they are developed. To say that the motions of my fingers as I write are the same that they would be if the conscious relationship were entirely absent, is little short of absurd" (p. 262). Nor is it because he denies a correlation between psychical and other (*e.g.* physiological) processes in the world-order, whether they belong to separate (mind- and world-) orders or, as he believes, are given within one (natural) order as a single psycho-physiological process (pp. 270, 271).

The truth is, as the author says, "that our interpretation of the moorhen's instinctive dive depends on our outlook towards the

universe at large!" (p. 125). And I believe that Lloyd Morgan's outlook is derived not (as he believes) from the true 'physiological' standpoint, but from the 'anatomical' standpoint of mid-Victorian physiology, which implied that separate investigations upon a number of small parts of an animal are equivalent to dealing with the animal as a whole. For Lloyd Morgan fully recognises, as we have just seen, that if consciousness usually accompanies an act, that act cannot be regarded as unchanged by the abolition of consciousness. He admits, as we have seen, that "conscious experience accompanies instinctive behaviour from its very outset . . ." (p. 50). He admits that conscious processes are correlated with physiological processes. Nevertheless, since the conscious experience in instinct involves intelligence, since intelligence must be located in the cortex, and since the beginning of instinctive experience must be traced to a time prior to the dawn of intelligence, he insists on severing cortical from subcortical activity, and on treating instinctive behaviour as independent of consciousness, corresponding to the activity of subcortical processes only.

For my own part, I believe that so-called instinct and intelligence[1] involve identical elements. In each there is the inherited, the congenital, the 'instinctive' factor,—often, at least, the expression of past generations of experience; in each there is the directive, the creative, the 'intelligent' factor, on which depends the future of mental evolution, and which is itself limited by congenital conditions. In so-called instinct, the intelligent factor, the power of modifying what is instinctive, is slight; in so-called intelligence, it is relatively enormous. For Bergson and Carr, on the other hand, instinct and intelligence are two radically distinct and divergent routes traversed in the evolution of mind. While according to Lloyd Morgan, we start from pure reflexes in which consciousness plays no part, and thence we pass to instincts which are merely composite non-mental reflexes; "with them," he holds, "the psychologist has no concern. He may cheerfully hand them over to the biologist" (p. 21), *i.e.* the physiologist. How and where "instinctive experience" arises, dependent partly on innate preperception, and partly on the later acquired meaning of sensory data, Lloyd Morgan does not tell us. At some definite moment (to satisfy his longing after absolute beginnings) it must take its start; and from that moment onwards the psychologist is permitted to enter. This instinctive experience—dependent on innate and acquired cortical activity (and hence, one would have thought, absent prior to the evolution of the cortex) and involving "conscious relationship to a given situation as experienced" and "intuition (in M. Bergson's sense of the word) of the process of relating" (p. 291)—he regards ". . . as the earliest phase of a

[1] I insert the word 'so-called' to avoid a recurrence of the misconception of my views as stated and criticised by the author on p. 239.

continuous development in the individual, which may lead up to the enriched thought-experience of man" (p. 163).

The same 'anatomical' standpoint, the same quest for beginnings, is responsible for the series of "interpretations" which Lloyd Morgan discerns within the universe. He distinguishes first the mechanical, then the mechanistic, next the organic, and finally the psychological interpretation (p. 259). Within the mechanical system, he says, science takes ". . . an instantaneous flash-photograph or snap-shot, A, of the configuration at a given moment, and a second snap-shot, B, at a subsequent moment . . ." (p. 253). Then, at a later moment, if the constitution of the system remains unaltered, science is able to "predict the exact configuration which will be given in snap-shot C" (*ibid.*). Such an A B C interpretation, he says, gives the *mechanical* relationships, and these are the sole concern of mechanics, which deals with mass-particles and positions. But although this suffices for mechanics, it is not, he says, yet generally applicable in physics and chemistry, still less in physiology and even less in psychology. For physics and chemistry a *mechanistic* interpretation is needed. "Shall we say that for any scientific determination we require a treatment in terms of D E F analogous to (but only analogous to, not identical with) the strictly mechanical treatment? Here D E F stand for three static stages snap-shotted in the changing routine of, let us say, a chemical reaction. If stage D and stage E are known, then stage F can be predicted and the law of the constitution of the system for the purpose in hand may so far be ascertained. No doubt matters are often very much more complicated than this. . . . But we want to get at certain basal principles of interpretation. I seek to indicate by the formula D E F that the determination is in terms of sequent stages of chemical or physical routine" (p. 256).

Let us now grant, says the author, that in the field of physiology and organic routine certain changes cannot be interpreted in terms of D E F alone. ". . . Let us apply the formula G H I to the law of the remainder—the strictly organic and physiological as such. Then we have the opportunity of correlating G H I changes with D E F changes without identifying the one with the other" (pp. 256, 257).

Finally—"Let us grant . . . that psychological products, and intelligent behaviour in relation to them, cannot be interpreted in terms of organic G H I without remainder. Let us call the law of the remainder X Y Z. This means that, in any routine of psychological products, if the constitution of the mental system be known, stages X and Y and Z are sequent stages; and that if you know X and Y you can foretell Z on the basis of routine. In the absence of routine, of course no scientific predictions are possible in any field of inquiry. Here X Y Z are not identified with G H I in the sense that the psychological is merely a phosphorescent accompaniment of brain-process. They can only be identified, within an

ideal construction, in the sense that the same process may have *both* physiological *and* psychological relationships, just as an organic process may have both physico-chemical and physiological relationships"! (pp. 258, 259).

Here, then, are the results of the 'anatomical' method, pushed to its farthest limits.[1] Seeking by hard and fast lines to determine the beginnings of life and mind, concerned only with snapshots at phenomena, it arrives at routine processes and abstract conditions which are never realisable in actual experience, and is compelled to ignore the features of creative evolution which make the world a progressive living whole. How the snapshot method can concern itself with processes as well as with products it is difficult to conceive. And yet process in the field of psychology, according to Alexander, whose views have greatly influenced Lloyd Morgan, is alone to be regarded as 'mental' (p. 141).

It follows according to the above procedure that, in place of the conception of 'cause,' science has to be content with what Lloyd Morgan usefully calls the "ground," or "constitution" of nature. "On the constitutive nature, as ground, will depend, in any given natural system, the character and value of the changes which are observable therein. On the constitutive nature of the hen's egg will depend the character and course of its development" (p. 142).

Such, then, is Lloyd Morgan's conception of the limits of science. Just as mechanics represents what is left in matter when its purely physical and chemical characteristics are ignored, so life is what remains in protoplasm when consciousness is severed from it. Just as there are "remainders" in chemical and physical processes which are not describable in mechanical terms, so there are "remainders" in mental processes which are not describable in organic terms! This is the outcome of his efforts to escape all conception of what he calls "Source,"—the "poetry" (as he terms it) of Bergson's philosophy, the entelechy of Driesch's vitalism.

Whether or not he has been successful in thus freeing science from metaphysics, whether or not the one can ever be satisfactorily severed from the other, whether or not the conception of Source—more than other useful hypotheses incapable of verification or realisation, which have been adopted by or are the foundation of science—is fatal to the progress of scientific knowledge,—the author has achieved an undoubted success in so clearly presenting his views on their relation. It was at the outset evident that a statement of the philosophical position of one who has devoted so much attention to the field of animal psychology could not fail to be of value and interest.

[1] It seems inconsistent after this for the author to cavil with McDougall's description ". . . of admiration as a binary compound, of awe as a tertiary compound, and of reverence as a blend of wonder, fear, gratitude, and negative self-feeling" (pp. 124, 125), because such analysis implies the possibility of the algebraical summation of vital and mental processes.

C. S. MYERS.

A History of Psychology, Ancient and Patristic. By George Sidney Brett, M.A. (Oxon.). London : George Allen & Co., Ltd., 1912.

The early records of Greek thought which have a distinct bearing on psychology, even in the wide sense in which Mr. Brett uses this term, are meagre, yet they reward patient study. In the introductory portion of the work before us they are set forth in a very readable form, and exhibited in their historical connexion. Mr. Brett here, as indeed throughout his whole work, shows that he possesses the synoptic faculty; though he can distinguish as well as compare. He writes like one who, himself a psychologist, has studied his Greek originals closely, taking as little as possible at second-hand. His history of Psychology is likely to be very serviceable to those who desire to observe the development of psychological speculation. Gratitude is due to any one who thus places the old and the new in their historical interrelationship. The psychologist who pursues his subject on merely modern lines may achieve excellent results; yet, if ignorant of the work of his predecessors, and especially the Greeks, he is too often betrayed into waste of time and a false opinion of his own originality.

Mr. Brett's style is sane and objective. He does not allow his critical judgment to be disturbed by predilection. He knows what is to the purpose of a historian, He seeks to interest and instruct his readers. He apprehends and appreciates differences of modern belief and opinion; but we cannot mark him down as the devotee of any particular school; nor does he condescend to engage in controversy.

Among the solid merits of his History is the careful statement of his sources and authorities. He has a sound scientific sense of his responsibilities, and so discharges them as to impress us with a conviction of his trustworthiness. We cannot here review his work in detail, but must confine our succeeding remarks to a few of its salient features.

He has a valuable article on the psychology of the Atomists. Successful science is too apt to be arrogant in psychology. The Democriteans, ancient and modern, while 'explaining' so much by the sense of touch, and reducing the other senses to forms of this, as the ultimate mode of perception, scarcely saw that they were leaving the problem of knowledge, and even of perception, still as as far as ever from solution. "We naturally ask" (says Mr. Brett, p. 42) "for an explanation of this fundamental sense, and here too we find no psychological analysis." The mystery of perception when 'explained' by reduction to touch is as profound as ever. Touch was the ultimate form of all apprehension, in the opinion not only of the Atomists, but of their greatest opponents. The well-known phrase, νοῶν καὶ θιγγάνων, suggests that (as Mr. Brett says, p. 144) the attainment of ultimate truth is a form of appre-

hension analogous to sense-perception ; we may add, to touch. We have only metaphors to help us towards a notion of how thought proceeds when it 'knows'; and all the fruitful metaphors seem confined within the province of touch. The 'mind,' in the long run, 'grasps' its object, as the hand does. But what the 'grasping' means here, or how the one act or process resembles the other, we cannot tell. For Plato, thought in its highest forms, Cosmic or human, presented itself as a sort of motion—a περιφορά or revolution of a sphere; and the revolving sphere knew by *touching* its object. "When the Soul of the Cosmus in its revolutions touches aught that has manifold existence, or aught that is undivided, she is stirred throughout her whole substance." So says Plato (*Timæus*, 37A) of the World-Soul; and for him the analogous doctrine holds for the soul of the individual. Not vision nor audition, but touch, with motion, is the fundamental objective factor of all knowledge for Plato, as it was for the members of the school of thought which Plato abhorred. The words νοῶν καὶ θιγγάνων have not yet been expounded in their full potentiality of meaning.

Mr. Brett's account of the so-called Sophists, and especially of Protagoras (pp. 57-59), is particularly interesting. "Protagoras holds a theory which implies a definitely psychological method. He is, in his time, what Locke was in later days, and Kant still later. He requires knowledge to be tested and limited by appeal to 'impressions,' and he is prepared to assert that where experience ends the knowledge ceases." His observations (p. 61) on the contributions of Socrates to the psychology of Ethics are illuminating. "As Socrates failed to distinguish the desirable, *i.e.*, the good in psychological terms, from the true end of man, *i.e.*, the good in metaphysical terms, so he fails to make clear the reason why the will always acts in accordance with clear knowledge. Both these defects are due to one source, namely, a defective analysis of emotion."

His treatment of the Aristotelian psychology of conduct, from simple conation to the practical syllogism (pp. 144-145) is satisfactory. As one reads it, one can hardly fail to become more profoundly conscious of the indebtedness of modern thought to the ethical and psychological speculation of Aristotle.

Mr. Brett's account of the post-Aristotelian psychology also is fresh and stimulating. "The Stoic re-writes the Platonic doctrine of reminiscence by the aid of Aristotle's doctrine of development. . . . The Stoic could say with Leibniz that everything comes through the senses except the intellect itself" (p. 173).

The process of modification which Stoicism underwent from Zeno to Marcus is carefully studied (p. 176). We like especially Mr. Brett's description (on p. 177) of the "severely personal and self-conscious later Stoics," who "struggle with the problems of daily existence, and honestly strive to explain how a man can avoid folly and keep his temper". But "Stoicism ended in moral fervour and logical bankruptcy".

The salient points in the progress of psychological theory after Epicurus are given with as much clearness, perhaps, as is possible. The ethical interest predominated thenceforth over the scientific for some centuries, during which the historian of psychology finds little to do except to mark time. We seem to discover in Mr. Brett's concluding words on Cicero, if read in connexion with a reference to Herbert Spencer on page 190, a clue to his own epistemology. There he writes (p. 199): " . . . a specious defence of immediate knowledge which obscured for many ages the real character of human convictions: a knowledge of evolution was required to show its fallacies and its truths; but before racial inheritance was an intelligible phrase it served to explain the stability of those beliefs which dialectic could not establish ".

For the Oriental systems with which he deals Mr. Brett has relied (he tells us in his Preface, p. ix) " on translations and the statements of others ". He knows how to select his authorities, and we can readily believe that his work when it deals with the Orientals is no less worthy of our confidence than we find it to be when dealing with the Greeks. At all events, it is most interesting. With the ' six systems ' of the Indian philosophy we seem to pass into a new world in which at first it is not easy to find one's way, so strange and dubious is the light in which we move.

Mr. Brett's description of Egyptian thought and of Mithraism, in relation to Christian psychology and eschatology, will be found useful by readers of more than one type. These forms of speculation, or rather of discipline, contain a wearisome lot of religious eschatology, and contribute little that is clear and distinct to psychological theory. They give us however certain points of view from which we may obscurely trace subsequent psychological developments. By their inspiring suggestiveness—their effects on the emotions and the will—they helped to determine certain features of patristic and mediæval psychology; so that their importance for the student of history needs no elaborate vindication.

" The Hebrew was (says Mr. Brett, p. 232) most interested in feeling, and his experiences were clearly of a type more common in the East than the West. For reasons not easy to define, the Eastern mind seems always strongly conscious of the organic states that accompany psychic activity. In the East the body is more easily affected, and a feeling has more reverberation through the system. Consequently Eastern writers dwell more insistently on inner organic states: the heart understands, obeys, and rejoices; the organs below the diaphragm are said to feel love or sympathy; the liver is moved in the yearning of affection." To this intensity of feeling we may trace much of the sublimity of Hebrew literature and the solemn impressiveness of Hebrew religion. We must not look to the Hebrews for scientific psychology; their work for humanity was done in a different province and on a higher plane.

When Hebrew sublimity and Hellenic clearness at last came to

be united, philosophy, if not psychology in particular, profited immensely by their union. We heartily recommend all who care for such matters to read the paragraphs (pp. 239-242) in which Mr. Brett introduces Philo. His description and criticism of the psychological bearing of the works of Clement, Origen, and the medical writers of Alexandria will supply English readers with much-needed and accurate information. We should like to dwell at length on his appreciation of Plotinus, but must not yield to the temptation. "In Plotinus," he says (p. 302), "for the first time in its history psychology becomes the science of the phenomena of consciousness, conceived as self-consciousness."

We have enjoyed the perusal of this work, and have no doubt that such will be the experience of many readers. It may, before long, reach the dignity of a second edition. If so, perhaps its author will correct the disquieting plural 'demiourgoi,' and one or two other matters, in the following sentences referring to Plato: "The rational soul is created by God and placed in the head; the demiourgoi create the irrational soul which is placed in the body" (p. 68, l. 20); and "in Plato the idea of imperfection in the created makes necessary the introduction of Demiourgoi" (p. 252, l. 21). There was but one Δημιουργός, and his was the perfect work; the imperfect was committed by him to the younger gods—the θεοὶ θεῶν of *Timæus*, 41A.

Mr. Brett, when discussing the Platonic view of man (pp. 86-87), dwells instructively on the difference between sensation and feeling as conceived by Plato and the Cyrenaics respectively; and he states the Platonic theory of feeling, as it appears in the *Timæus* and *Philebus*, satisfactorily in the main. He is aware of the ambiguity of the word αἴσθησις in the psychology of Plato (see note, p. 364). One would have expected him, therefore, to be particularly careful in his own use of terms, and it is matter of regret that he does not confine the word 'feeling' to the sense determined for it in psychology by such writers as Mr. Ward or Mr. Stout, but uses it unsteadily, so as to signify sometimes the purely subjective element of pleasure or pain, at other times the element of cognition which is more properly designated as sensation or perception. Thus (p. 84) he writes: "While feeling is the psychological core of the mental state that forms judgments, it is not the whole mental state; knowledge is more than feeling . . . sensation does not carry us beyond its own limits of time It is possible to prove that sensation is only a part of the mental state, etc." Here we are much mistaken, or else he uses 'feeling' for 'sensation' and 'sensation' for 'feeling'; though we confess we find it hard to understand why a writer does so who can also use the terms correctly, as Mr. Brett does elsewhere, distinguishing carefully between the affective and attentive processes.

On page 129, expounding Aristotle's theory, he says: "sensation itself is from the first a degree of rationality; it is potentially

intelligible". By 'intelligible' here he probably means 'intellectual' or 'intelligent,' 'noetic' not 'noümenal'. The substance, however, of his exposition of Aristotle's theory of the intellectual activities is admirable, and we do not wish to be understood as carping at it. He says of Plutarch (p. 256) that "with a touch of Orientalism he places beside the principle of order a principle of disorder in the universe". But this "principle of disorder" had been already adopted by Plato in his *Laws* (896E) where he assumes the existence of an evil as well as a good World-Soul. Whether Plato derived this assumption from an Oriental source may be doubted; but at least it had shown itself in Hellenic thought more than four centuries before Plutarch's time. We cannot help remarking that Mr. Brett has hardly made sufficient use of the *Laws* in his exposition of Plato's psychology. This treatise, indeed, is generally too much neglected, as if eclipsed by more brilliantly written but less mature works of Plato.

On page 191, in the sentence "Violent altercations, the exchange of 'paradise and the gutter,' which the drunkard calls life," the word 'altercations' probably is a printer's error for 'alternations'. Also, on page 295, in "A modern writer might, with less accuracy, call it an unconscious influence," the word intended was probably 'inference'.

But small blemishes cannot tarnish the character of Mr. Brett's work. We shall await with interest the continuation of it which he promises in his preface.

JOHN I. BEARE.

Present Philosophical Tendencies: a Critical Survey of Naturalism, Idealism, Pragmatism and Realism, together with a Synopsis of the Philosophy of William James. By RALPH BARTON PERRY. New York and London: Longmans, Green & Co., 1912. Pp. xv, 383.

THE three main topics of interest I have found in Prof. Perry's very readable volume are his account of Pragmatism, his synopsis of the thought of William James, and his own Realism, and as these seem to be also the three main interests of the author himself, no injustice will be done him by passing over with little more than a mention his very searching criticisms of Idealism and Naturalism and his gallant defence of the Inquisition in chapter 1. A further reason for confining this review to the above three subjects may be found in the fact that it seems eminently desirable to clear up the relations between Pragmatism and Realism. For the New Realists, like the pragmatists, are people who endeavour to think clearly, and are oriented towards the future rather than the past, and more solicitous to come to terms with science than with theology.

I. Prof. Perry's account of Pragmatism manifestly shows that he has honestly tried to understand it, and to state its contentions fairly. And that is more than can be said for the great majority of its critics. Nevertheless he does not seem to have penetrated quite to the roots of the matter, and seen from what point its various doctrines branch out. Yet he sometimes comes so near to it that it is curious that he should have missed it. He sees, for example, that Pragmatism is "the biocentric philosophy" (p. 197), but not that it is quite specifically the philosophic corollary of Darwinism. He sees that the common measure of all values and tests of truth is the psychological fact of interest, and actually mentions a kind of pragmatism which "consists in the proof that the theoretic interest is itself in fact an interest" (p. 214): yet he passes by this fountain-head of all the varieties of pragmatic corollaries in one short paragraph, and regards it as "a strict and limited pragmatism" which is guiltless of the "reactionary and dangerous" attempt to "coordinate and equalise verification by perception and consistency with verification by sentiment and subsequential utility". Had he grasped that the immediate parent of all the chief pragmatisms is the psychology of James, he must have seen that this psychological interest is their common logical foundation, that it embraces and absorbs the very relative and shifting distinction between 'theoretic' and 'practical' truth, and that pragmatism could not be censured for denying "the strictly theoretic value of ideas" because there is no such thing. Prof. Perry is probably too young to remember the terrible cant that used to be talked about 'disinterested' knowing, and this may explain, if it does not excuse, his statement (p. 362) "that the theoretical process is itself interested . . . is a fact that no one has ever questioned"; but if he himself recognises this fact, is it not astonishing that it should not have occurred to him that the 'theoretic' values *must* therefore be psychic congeners of the other values, and that it is not obscurantism, but biology, which impels pragmatism to note the copious cases where the vital value of a belief seems directly to generate its 'theoretic' truth by eliminating dissentients and compelling its universal acceptance by the survivors, as, *e.g.*, in the conspicuous case of the optimistic bias in favour of life? Had Prof. Perry grasped this biological necessity, he could hardly have committed himself to the assertion that "science does not deal with value" (p. 87), and might even have seen that every judgment must have been asserted as the successful survivor in a struggle for existence in which it has been judged *more valuable* than any alternative, and that it is therefore quite futile to contest the psychological utility of every actual judgment, and important only to take cognisance of the *dossier* of every alleged 'truth,' and to determine for whom and for what purposes it has what sorts and degrees of value.

A recognition of the biological and psychological foundations of

pragmatism would further have deterred Prof. Perry from his laboured attempts to read a metaphysical meaning into a number of pragmatic pronouncements which are clearly methodological, and to put to pragmatism the dilemma that if it will not submit the mind passively to a (realistically conceived) environment as "the price of adaptation," it must leave the knower "suspended in mid-air," and develop into a Fichtean idealism (pp. 219-220). The simple answer is that for pragmatism the knowledge-process is the *life-process*, and is not merely 'theoretic,' and that to take data as real for a purpose in order to operate on them further commits one to no metaphysical theory about their ultimate reality, and does not require one to give to knowledge finality and to 'reality' an illusory "repose in knowledge" (p. 220).

II. It follows from Prof. Perry's conception of pragmatism as a theory which must be forced into metaphysical categories and divided into a realistic and a subjectivistic form that he has to differentiate James's pragmatism from those of Dewey and myself. Here he encounters the obstacle that James has explicitly denied the existence of any essential difference. Prof. Perry very candidly admits this; but curiously enough he appears to have overlooked my own endorsement of James's pronouncement and my very detailed discussion of the very issues he is raising.[1] Until Prof. Perry has disposed of this evidence, I see no reason to depart from the view that James's 'realism' is pragmatic and not metaphysical, and that my 'psychologism' is 'critical' and not 'subjectivistic'.

Prof. Perry's account of James's philosophy, which is appreciative and on the whole meritorious, is somewhat disfigured by his straining to convert James's immanent epistemological realism into the transcendent metaphysical realism of a 'new realist'. It fails also to bring out the intimate connexion between James's psychology and his philosophy; but its most serious mistake would seem to be that it attributes to him an "existential sense-manifold" *à la* Hume-Kant-Russell (p. 367). For surely if there is one outstanding and epochmaking achievement in James's psychology, it is that it conceived the flow of experience as a *continuum*—and a *sensible* continuum at that, and *not* a conceptualised substitute for the immediate experience of continuity such as some mathematicians have (legitimately for their purposes) invented.

III. All these flaws in Prof. Perry's exposition really spring from a common source. His mind is so preoccupied with the metaphysical antithesis between Realism and Idealism that he is always trying to reduce all other issues to this. Yet the ultimateness of this antithesis is always assumed, and his arguments for Realism are all vitiated by his failure to consider the possibility of a third alternative, which would repudiate *both* the antagonistic dog-

[1] In my review of James's *Meaning of Truth*, MIND, No. 74.

matisms. That such an alternative may yield the right solution of the problem would seem to be indicated by the gaps in Prof. Perry's arguments for Realism.

(1) Prof. Perry gives much prominence to what he calls 'the Ego-centric Predicament,' *viz.*, the fact that any reality known is known as it is when it is known; but the right inference from this would seem to be neither idealism nor realism. If all knowable facts necessarily stand in the knowledge-relation, and are given as 'facts' in relation to a knower, is it not equally unsound to infer that the knower creates his objects, and that objects are (absolutely) independent of the knower? Why not infer that the correlation of a-mind-with-objects and objects-for-a-mind is the ultimate fact for philosophy? This inference, which like the Ego-centric Predicament has long been known,[1] has sometimes been wrongly styled 'idealism'; but it manifestly does not warrant the assertion of any priority of mind over matter. The Ego-centric Predicament seems to exclude nothing but the right to assert unknowable realities. Unfortunately these are precisely what Prof. Perry wishes to assert. His procedure is to ignore this third possibility,[2] to show that the idealist has not proved his case, and then to assume that therefore the realist has proved his. In point of fact his proof (p. 125) that there may be 'tulips' and 'ideas of tulips,' and that the 'tulips' may belong both to nature and to mind does not go any way towards showing that the existence of tulips has any meaning apart from their place in an experienced world: as Prof. Pratt has pointed out in his very able critique of Prof. Perry's position,[3] it does nothing to bridge the chasm between their *immanent* (pragmatic) and their *transcendent* (realist) 'reality'.

To prove Prof. Perry's realism something more is wanted than a proof of the failure of idealism. But it seems imperative to agree with Prof. Pratt that none of his positive arguments are cogent. (*a*) He himself admits that the "theory of the externality of relations is not sufficient in itself" (p. 320). (*b*) That "the object of a sensation is not the sensation itself" (p. 321) may be admitted by all; it makes a distinction which might be found useful even by the legendary solipsist, if he should ever try to put his experience in order, at any rate if his eyes were opened to the ambiguity of 'sensation,' and he discriminated the object apprehended from the apprehending thereof. But it is hard to see how this should establish the need for a wholly unexperienced object, and

[1] I myself recognised it (without any sense of asserting a novelty) so long ago as 1891. *Cf. Riddles of the Sphinx*,' ch. ix., §§ 13-14. In the 1910 edition the argument is somewhat expanded. *Cf.* also *Studies in Humanism*, p. 465, and *Arist. Soc. Proc.*, 1910, pp. 220-221.

[2] This is the more curious as he appears to have read all the writings referred to above.

[3] *Journal of Philosophy*, ix., No. 21.

on page 322 Prof. Perry seems himself to concede this. (*c*) There remains therefore only the plea that "the organism is correlated with an environment, from which it evolved, and on which it acts. Consciousness is a selective response to a preëxisting and independently existing environment. There must be something to be responded to, if there is to be any response" (pp. 322-323). Unless the question is begged in the "*independently* existing environment," nothing is here proved except the *correlation* of the mind and its 'environment'; but this is precisely the conclusion of the third alternative Prof. Perry has ignored. Perhaps when he has examined it, he will convince himself that the dispute between Idealism and Realism is not the least meaningless of philosophic controversies, and that the question which of them is more inadequate is merely academic.

F. C. S. SCHILLER.

The Science of Logic: an Inquiry into the Principles of Accurate Thought and Scientific Method. By P. COFFEY, Ph.D. (Louvain), Professor of Logic and Metaphysics, Maynooth College, Ireland. Two volumes. London: Longmans, Green & Co., 1912. Pp. xx, 445, and vii, 359.

THE aim and scope of Dr. Coffey's substantial treatise are, "in the first place, to present in a simple way the Principles of the Traditional Logic expounded by Aristotle and his Scholastic interpreters; secondly, to show how the philosophical teachings of Aristotle and the Schoolmen contain the true basis for modern methods of scientific investigation, inductive no less than deductive; and finally, to extend, rather than supplement, the traditional body of logical doctrine by applying the latter to some logical problems raised in more recent times". All this does not promise much in the way of a new contribution to the ordinary logic. Indeed, the author makes no pretensions to having written anything new or original. His intention was, in the first instance, to produce a fairly complete class-book, a sort of *summa logicae*, in which all his students might find what they require, each according to his needs. The parts intended for beginners are printed in large type, while those printed in smaller type are meant for more advanced students. The references for further reading, appended at the end of each chapter, are mostly to other text-books, such as Joseph, Keynes, Venn, and Welton, etc. One is inclined to think that there is already a surfeit of text-books on logic, and that teachers of logic would be doing much more valuable work if they endeavoured to contribute something original to the advancement of the science. Still, Dr. Coffey's treatise is not altogether an ordinary compilation. On the one hand it will serve to make more easily accessible to the

beginner a certain amount of information about Scholasticism which will be of use to him if he takes up the study of the history of philosophy; on the other hand, it will serve the useful purpose of introducing a certain amount of the more modern logical doctrines to the notice of Catholic readers who may not be so ready to assimilate anything unless it is administered to them through a proper Catholic medium, imbued with the right Scholastic spirit. For Dr. Coffey writes frankly from the standpoint of Scholasticism, feeling convinced that "no recent system of philosophy contains a body of doctrine more in keeping with the established truths of science than are the doctrines of Scholasticism". Of course, Scholasticism itself has considerable flexibility and elasticity, and Dr. Coffey is thinking of it "as conceived and expounded by those who represent the neo-scholastic movement in modern philosophy," such as the contributors to the Louvain *Cours de Philosophie* and the Stonyhurst Philosophical Series.

Dr. Coffey's *Logic* has thus a very definite philosophical outlook for its background. Again and again theological discussions are introduced into the exposition, and the treatise breathes a religious atmosphere which is quite uncommon in works on logic. The book is almost aggressively theological. This was perhaps inevitable in the case of a writer who is convinced that "the great group of facts comprised in the establishment of the Christian religion nearly two thousand years ago, is bound up with truths of greater import to men than, for instance, all the laws of the science of mechanics". The introduction of such interesting topics imparts considerable vivacity to Dr. Coffey's discussions, and he has no difficulty in producing something far more alive than the "arid formalisms which sometimes pass for logic". Still, the wisdom of such a course seems doubtful. True, the mediæval logicians put a considerable amount of theology into their logics, and even a modern logician like Jevons concludes his *Principles of Science* with something like a pious meditation. But Dr. Coffey's theological aggressiveness is not likely to serve the best interests of either logic or religion. Religious people might object to the introduction of religion into the arena of logical disputations; and logicians might object, with even a greater show of justice, that to show special favour to matters of *faith* while teaching the science of *evidence* may easily encourage a disposition of facile contentment with an inadequate measure of proof. The study of logic might thus be made to defeat its main object.

Considering what has just been remarked there is a certain quaintness in Dr. Coffey's complaint that modern writers on logic discuss many problems which would find a more appropriate place in works on epistemology and ontology. One would have thought that epistemological problems are at least as relevant to logic as are problems of religious philosophy. However, the complaint is not altogether unjust, nor is it new. Logicians (Dr. Coffey not ex-

cepted) are much too prone to treat logic chiefly as a propædeutic to philosophy. To some extent this is natural. Most students and teachers of philosophy have made their first acquaintance with philosophical problems in the course of their study of logic, which certainly is a good introduction to philosophy. But it must not be forgotten that logic has, or ought to have, a duty also to those who have no special philosophic bent. It should be remembered that the study of logic ought to, and can, help *every* intelligent student to obtain a general conception of the nature of research, and to improve his powers of estimating evidence. The first business of the teacher of logic is to enable his students to understand the main types of inference sufficiently to recognise them in concrete cases, and to form a reasonable estimate of the cogency of such concrete cases in so far as the evidence is presented and intelligible to them. This requires a considerable amount of drilling and exercise. But the kind of questions and exercises which Dr. Coffey gives in his volumes are not likely to accomplish this object. They are useful enough in their way; but they are not the most useful. Concrete examples for logical analysis are much the most important. Lots of students can write at large *about* this or that form of reasoning and yet cannot recognise the thing when they see it in the concrete. Dr. Coffey devotes too much space to technicalities, many of which are quite superfluous, at least for the beginner, but does not provide the necessary material for the most vital part of logical study. Such then, in our opinion, is the first business of logic; and its performance, free from all avoidable complications and encumbrances, is bound to benefit *all* who study it, whether they mean to be philosophers or scientists, lawyers or politicians, artists or artisans, or gentlemen of leisure. Not that the rest of logical theory is worthless—far from it. But it can be postponed; and even then the curriculum or choice of topics might well be adapted to the special needs of the student. Some students may take a special interest in logic as such, so that nothing logical is alien to them; others may be specially interested in scientific methods (including statistical methods, etc.); some may be specially keen on epistemological problems: others may evince interest in symbolic logic. Logic includes all these departments, and nobody has a right to exclude any one of them from the proper domain of logic merely because it does not happen to interest him. But it is a grave mistake to sacrifice the central function of logic to any one of its more specialised developments. Yet the teacher of logic is too often tempted to make logic prematurely philosophical, because he regards his logic class as a nursery or a hunting-ground for students of philosophy. The result is that those students who do not proceed to the study of philosophy (perhaps even these) do not benefit from the logic course as much as they should, and are sometimes even made muddle-headed by that little knowledge which is dangerous. And this is mainly respon-

sible for the note of discontent which has been voiced, especially of late, in more than one adverse criticism of logic.

Dr. Coffey follows Scholasticism and the traditional logic very closely, though not uncritically. But the following points and peculiarities seem to call for criticism. We note them in the order in which they occur in the volumes under review.

(1) A singular term is defined as one which can be applied in the same sense to only *one definite, individual thing*. Yet on the very next page it is stated that *collective* terms may also be singular. This is quite true. Only the definition should have been corrected accordingly.

(2) A negative term, according to Dr. Coffey, *implies the presence of no attributes whatever*. If so, then the word 'nothing' (or one of its equivalents) would be the only negative term. Surely it is one thing *not to imply the presence of some specific attribute or attributes*, and quite another thing *to imply the presence of no attributes whatever*. Perhaps it was only a *lapsus calami*.

(3) Dr. Coffey adopts Dr. Venn's view that 'if' in hypothetical judgments expresses a combination of *doubt* and inference. Dr. Bosanquet's just criticism of this view is not dealt with or even referred to.

(4) In his treatment of the existential import of propositions, Dr. Coffey follows Dr. Keynes very closely. The subject need not be discussed here since detailed criticism of the views of Dr. Keynes are to be found in the present writer's *Studies in Logic*.

(5) Circumstantial evidence is treated in the usual way, which does not appear to be quite correct. It is not merely an accumulation of individually inconclusive deductions or analogies, though it is that to some extent. Its salient feature is the formation of an hypothesis which alone will explain all the known circumstances. It is accordingly a form of induction or *inverse* deduction. True, it leads to no real generalisation. But generalisation is not essential to induction.

(6) When discussing the nature of syllogistic inference and the paradox which it is alleged to involve, Dr. Coffey shows the usual tendency to exaggerate the importance of novelty in inference, and is thereby driven to draw distinctions which are more subtle than real. The conclusion *may* be new, but it *need not* be. The important feature in syllogistic inference is to realise the *connexion* between the conclusion and the major premiss. The conclusion and the major premiss may both be known as mere brute facts, as disconnected facts. As soon as their *connexion* is realised there is reasoning—be the bare facts of the conclusion never so stale.

(7) Dr. Coffey agrees with Mr. Joseph in declining to regard induction as a form of inference. His arguments are not convincing. Induction involves deduction, it is true, but also a great deal besides. And the whole procedure has such an organic unity or continuity that it strikes us as unreasonable to separate the deduc-

tive aspect from the rest. It should be considered as a whole. And as a whole it has a distinctive character which justifies our regarding it as a special form of inference. It is much more difficult than deduction, though even deduction is not nearly so easy as it is commonly made to appear.

(8) Dr. Coffey enters a strong protest against the tendency to attach too much importance to the concepts and methods of physical science. "If," he writes, "the logician thinks it a part of his duty to teach us how to measure *masses* and *motions* of *matter* by the 'method of means,' the 'method of least squares,' etc., may we not reasonably expect from him an equally detailed code of directions in the task, let us say, of estimating the value of the historical evidence for and against the alleged fact—so momentous in human history—that Christ rose from the dead after His crucifixion?" Dr. Coffey does not seem to be aware that some logical treatises do deal with the methods of Biology, of History, and of Philosophy, etc., as well as with those of Physics, etc. Still, his protest is not altogether uncalled for. He is probably right in suggesting that its excessive devotion to the physical sciences has imparted to logic a certain bias so that it appears to encourage the application of the concepts and methods of mechanics to all departments of human inquiry. He also insists, rightly no doubt, that it is unjust to expect evidence of the same degree of cogency in all kinds of subjects. We must be content if "the evidence is as strong as can be reasonably expected in the matter under consideration". On the other hand, it should not be forgotten that the physical sciences do furnish the best illustrations of cogent methods, and that educationally it is best to begin with strict models of inquiry rather than with such as are less certain. There is always the danger of encouraging a low standard of reasoning. Still, much can be done, indeed has been done, to correct the abuse in question.

(9) The preceding remarks will have prepared the reader for the intimation that Dr. Coffey is a firm upholder of 'final' causes. The teleological conception of the world is legitimate enough, and in principle is vindicated in most books on logic. Dr. Coffey, however, applies the principle with a liberality which makes one envy his familiarity with the secret counsels of the Almighty. One would have thought that Voltaire had quite killed this sort of excess.

(10). The distinction between (*a*) metaphysical, (*b*) physical, and (*c*) moral certitude seems to confuse *degrees* of belief with the *objects* or contents of belief. The analysis and comparison of abstract ideas are said to yield metaphysical certitude. The testimony of our senses gives physical certitude. The testimony of our fellow-men induces moral certitude. On the face of it, it seems unsafe to associate permanently certain degrees of certainty with special sources of evidence. You might have all degrees of certainty in any one or in each of them. Indeed, Dr. Coffey soon finds

occasion to remark that 'moral' certitude "may sometimes be as firm in its own order as physical or metaphysical certitude in theirs". Besides, degrees of certitude depend on all sorts of psychical conditions (bias, emotional state, etc.), which cannot be said to vary in any definite way with the sources of evidence. If, on the other hand, the merely subjective aspect of the 'certitude' is ignored, then 'certitude' is really identified with 'evidence,' and the suggested correspondence of the two is mere verbality. Much of what Dr. Coffey says in connexion with this topic is interesting and true enough, but might have been said quite independently of this distinction.

(11) Dr. Coffey indignantly repudiates the charge that Catholic or Scholastic philosophy is opposed to the progress of science because, among other things, it sets up *authority* in the place of *reason.* He assures his readers that "even the uneducated Catholic knows that faith . . . cught to be reasonable, that blind faith is unnatural to a reasoning being and derogatory to the dignity of his nature". And he proceeds to explain that the beliefs of most people are not the outcome of their own independent thinking but rest on the authority of the few. "The masses," he maintains, "may transfer their allegiance from leader to leader, but they will ever be led by some *authority* or other—as those are, nowadays, who proclaim in the name of modern science that reason is at last emancipated from the shackles of authority and will henceforth bow in reverence to science alone!" Much of all this is true, no doubt. But Dr. Coffey seems to overlook entirely the vast difference there is between authority which merely bases itself on human reason, and authority which claims to be divine and has vast social forces and material resources to enforce that claim. History has shown how much easier it is to remedy mistakes promulgated in the name of reason than those which have been promulgated in the name of God. We impute no bad faith to anybody. *Humanum errare est.* But the gravity of the error is proportionate to the kind of authority in whose livery it masquerades.

(12) Speaking of miracles, Dr. Coffey maintains that "*it is a flagrant violation of logical method* to dismiss all narratives of the miraculous from human history as untrue and incredible on the ground that 'miracles are impossible,' as long as the latter contention remains unproven". This is true as far as it goes; only it does not go very far. The kind of vague possibility which is vindicated cannot warrant the acceptance of miracles in the absence of adequate evidence. Dr. Coffey does not maintain that it does; only, to judge by some of his incidental utterances, his standard of evidence in such matters seems hardly high enough. Mere possibilities are precious little. Most people find it quite enough to attend to probabilities. In any case the burden of the proof rests with those who defend miracles. Human knowledge is not likely to be advanced by such a liberal recourse to a *deus ex machina* as

Dr. Coffey appears to approve. Nor is it at all clear in what way the cause of religion will be helped by such special association of the divine with the unusual, and its apparent dissociation from the usual.

However, some of the views which appear to us erroneous may only serve as a special recommendation to some readers. And, in any case, from the standpoint of those who are specially interested in Scholastic logic and believe in Scholastic philosophy, Dr. Coffey's *Science of Logic* must certainly be commended as a highly successful enterprise.

A. Wolf.

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Elements of Physiological Psychology: a Treatise of the Activities and Nature of the Mind from the Physical and Experimental Points of View. By George Trumbull Ladd and Robert Sessions Woodworth. Thoroughly Revised and Rewritten. New York, 1911. Pp. xix, 704.

Twenty-four years ago, when the first edition of this work appeared, the adjective 'physiological,' applied to psychology, was equivalent to 'modern'. As was natural at so early a period in the development of the 'new psychology,' its method and spirit were but ill-defined even in the minds of its chief workers. That it should not be metaphysical was the principal point established: that it should be mathematical was the ultimate hope: meantime it might, for want of a better term, be called physiological. The first chapters of Wundt's treatise were accordingly given to an account of the nervous system, and his example was followed by others, despite the fact that between the physiological and psychological chapters almost no connexion could be made out. That they were bound in the same cover, and that a connexion of some sort between their contents did exist, was all that could be said. Realising that the physiology of the nervous system was unable to throw any light upon psychology, later writers dropped the term 'physiological'. The authors of this rewritten edition of Prof. Ladd's book, in retaining the term, do so with a new implication: they take it in its strict sense and undertake really to set forth the correlations so far established between the laws of the brain and those of the mind. The study of nerve physiology has now reached the point where it does to a certain extent illuminate psychology, and a physiological psychology begins to be possible.

Part I. of the present edition, on The Nervous Mechanism, is, accordingly, considerably expanded. It begins with two new chapters, on The Place of the Nervous System in the Animal Kingdom, and The Development of the Nervous System in the Individual. The chapters on the gross structure of the nervous

system, on the end organs, and on the cerebral hemispheres and their functions, are largely rewritten: those on elements of the nervous structure, on the chemistry of the nervous system, on the nerves as conductors, and on the reflex functions of the nervous system are wholly rewritten. The expository skill of the authors in these chapters is deserving of the highest praise. Nowhere else, so far as the reviewer knows, can so clear and systematic a view of the enormously complicated structure and mechanism of the nervous system be obtained with so little fatigue on the reader's part. The neuron theory is adhered to, and the core-conductor theory of the nervous current is adopted, with the suggestion in a footnote that a certain very slight amount of chemical change is also probably involved. Sherrington's treatment of the reflexes is followed throughout. In the chapter on end-organs, where the statement is made that the rod-pigment is concerned in adaptation, reference might have been made to the recent assertion of Hess that adaptation occurs in certain lower vertebrates whose retinas are lacking in rods.

The presentation of the body of psychological facts in Part II., in the chapters dealing with the quality and intensity of sensations, the time-relations of mental processes, sense-perception, affective processes, memory and learning, and the mechanism of thought, has undergone such changes and additions as are made necessary by the discoveries of the last twenty years. The chapter on thought contains but little reference to the introspective work of the Würzburg school. In the chapter on memory, Ebbinghaus's figures indicating that the number of repetitions necessary to learn a series of syllables increases more rapidly than the length of the series are given without criticism, although Meumann and others have found this law not to hold except for very short series involving the memory after-image rather than true learning.

The suggestions of the authors as to the possible correlations between physiological and mental processes, which are set forth in the last chapter of Part II., demand especial attention, as the success of such efforts at correlation measures the success of physiological psychology. Consciousness is held to be an index that the nervous current is traversing cortical synapses. What conditions the degree of consciousness is not stated: objection is made both to the action theory of Münsterberg and to the opposite theory that the maximum of consciousness occurs when there is resistance to the motor discharge. The former is held to contradict the facts of habit formation; the latter "hardly seems to comport well with all that we know about the preference of objects, both in perception and recall—a matter which seems to be determined by influences that do not manifest themselves in consciousness at all". As preferable to McDougall's fatigue theory of varied reaction and shifting attention, the authors suggest that each neurone may have two modes of reaction, positive and negative, the former being

followed by the latter. A later positive phase needs to be assumed to account for perseveration. The selection of the successful response in trial and error is explained as follows: "the unsuccessful reactions are less strongly associated than the successful, because each one of the former is at some moment given up or inhibited, and this inhibition too, being made under the influence of the adjustment, tends to become associated with it". The theory of James and McDougall that the formation of an association by contiguity is to be explained by supposing the drainage of energy from one centre to another when the two are simultaneously active is met by the objection that, if it were true, both terms of the association could not be in the focus of consciousness at the time when the association is being formed. Instead, as a "formulation of the minimum conditions of association," it is suggested that connexions already existing are made functional. "Let two centres, thus loosely connected, be thrown into simultaneous or nearly simultaneous excitement. Each centre discharges mainly into some previously trained channel, giving rise to motor reactions, percepts, or associated ideas. But after each has thus discharged itself, its activity does not come to an abrupt end. Each probably continues active to a slight extent, and each is also in a condition of heightened excitability; therefore the conditions are favourable for the passage of currents across the imperfectly formed synapses between them." The most important physiological condition of the complexer forms of mental activity is, according to the authors, the formation of 'higher units' in the central nervous system. The conception of such units, consisting of a collecting mechanism by which many sensory stimuli may unite to produce a single response, as in percepts, and a distributing mechanism by which selection among various responses may be made, would seem to point at least in the general direction which must be followed if we are to have a physiological explanation of the higher laws of mind.

On the whole, the reading of this section leaves one encouraged as to the possibility of such an explanation. It is the more surprising to find that the final section, on the Nature of the Mind, although rewritten since the first edition, seems to contradict the expectation that the laws of the mind's activity will ever be fully paralleled by laws of brain activity. That we shall never know why brain activity is accompanied by mind activity at all; that "the mind is a real being," one may grant. But to read such passages as the following, after having just been led to hope that the principle of higher units could be used to explain all cases of controlled association, leaves upon one's mind highly contradictory impressions: "Among each of these three great classes of acts [feeling, knowledge, and will] there are certain kinds that defy all attempts whatever to correlate them with changes in the nervous mechanism, or to explain them as necessarily or actually arising out of such physical changes. Such are the feelings of moral obligation, the sentiment of justice,

the love of truth, and certain of the higher æsthetic feelings. Among the acts of knowledge, such are the mind's relating activity, its use of the principle of reason and consequent in drawing deductions, its confident assumption that similar phenomena are signs of like realities, and that the world of sensuous individual experience is but the manifestation of an invisible world of real beings, with permanent properties and forces, acting and reacting under law. Such also are the acts of deliberate choice among courses of conduct, under the influence of moral considerations—the so-called acts of 'free will,' in the highest sense of the term. Not one of the higher acts of feeling, knowing, or willing, so far as its *sui generis* character is concerned, admits of being correlated with, or represented under, any of the conceivable modes of the motion or relation of molecules of nervous substance." The force of '*sui generis*' here is not clear: it may be truly said that not even simple sensations in their *sui generis* character can be correlated with their physical antecedents: we do not know why a certain wave-length should be seen as red. But the authors are evidently refusing a correlation to the higher mental processes that they grant to the lower, and for this reason the book makes the impression of denying in its final section that which it is the purpose of the preceding sections to prove.

MARGARET FLOY WASHBURN.

Das Seelenleben des Kindes. Von KARL GROOS. Berlin: Reuther & Reichard, 1911. Pp. 334.

THIS is a useful book for Professors and Lecturers on Educational Psychology; but requires too much knowledge of psychological theory and disputed psychological issues to be very serviceable to teachers generally, at least so far as English teachers are concerned.

Psychology cannot usurp the function of Philosophy. Philosophy shows the aims of Education, whilst Psychology shows the way, the means, and the hindrances, as the author, with approval, quotes from Herbart. But this frank acceptance of the supremacy of Philosophy demands, in my judgment, and, I think, in that of the writer, all the greater care and industry in ascertaining the relevant facts; for though ideals are not wholly dependent on facts, they may be much modified by them, both positively and negatively. The methods of observation in Child-psychology are, of course, like those of psychology generally. But what is the function of the teacher in this work? The author discusses James's attitude. James thinks that a highly theoretical and absorbing interest in Psychology may even do harm to a teacher; the psychological principles useful to the teacher can be written on the palm of one's hand, he says. It was generally felt by educationists, both that theoretical psychology was, by itself, of relatively small service

to the teacher and also that the technique of laboratory methods of experiment was outside his range. Fortunately, the growing science of Experimental pedagogy is likely to lead us out of the *impasse;* we shall solve the dilemma by practice—a truly English method.

But quite rightly, in chapter iv., on the Analysis of Experience, Prof. Groos insists that we have no choice of method at the outset, for we must start with our own analysed consciousness. I question whether the long discussion which follows, on rival methods of analysing the adult consciousness, is in place in a book written mainly for the educationist. The next chapter. "Die intentionale Beziehung," contains another long theoretical discussion.

In chapter vi., on 'Inherited and Acquired Reactions,' the author gives educationists a useful reminder of the place of thought in his threefold schema of Reaction—Perception, Inward elaboration and Motor expression. There are educationists to-day who, with inadequate psychological knowledge, speak of all mental reaction as a sort of reflex process, in which thought has no share. They tend to regard intelligence as specially indicated by sharp and swift reaction. To them I commend Prof. Groos's remark on page 48: "Die Reflexe des Neugeborenen sind darum so lebhaft, weil seine Gehirntatigkeit noch sehr unvollkommen ist". From 'reflexes' the author turns to the "more popular" conception of Instinct, and shows how difficult and complicated the conception is. We need only to remember the Bergsonian view that instinctive and intelligent developments diverge and are indeed antagonistic to each other in opposition to the ordinary notion that instincts ripen into intelligent activities to see what little likelihood there is that such a debatable conception will throw much light on the work and difficulties of the teacher. It might well be dispensed with in favour of 'spontaneous activity' on the one hand and 'trained activity' on the other, at least so far as educationists are concerned.

In chapter vii.—Das Spiel—Prof. Groos deals with a subject which he has made specially his own. Most of us know his *Play of Animals* and his *Play of Man;* and, though I dissent personally from his dominant theory of Play as preparation for the serious activities of life, I fully recognise the valuable nature of the contributions he has made to the literature of the subject. I should like to devote the whole of this review to his treatment of it, but I fear I cannot even indicate the various theories of Play which the author discusses. The root questions at issue seem to lie between 'preparation' and 'recapitulation,' and between recapitulation as necessary to hasten the decay of what is not wanted in adult life (Stanley Hall) and recapitulation as a hindrance by the strengthening of modes of thought and action which are not in accordance with the activities which will be required in adult life. We need more definite knowledge. We do not know, for example,

whether tadpoles which waggle their tails most lose them quickest, or whether the tadpole that loses his tail first grows up to be the more efficient frog.

In the chapter on Association (chapter viii.) the author starts with a comprehensive and vague definition and gradually introduces limitations and corrections. It does seem to me, despite the theoretical difficulties, that Succession, Contiguity, Similarity, and Contrast are conceptions which perform valuable pedagogical service. We have, as is seen later, associations determined merely by the experiences themselves (though even these imply a certain mental structure); we have those determined by conative tendency, and also those determined by volition in the stricter sense. It certainly seems worth while to arrange experiences, so that their operation may help the tendency and the volition, or even, if necessary, may work against them. Section C in chapter viii. gives some useful references to experimental work and quotes Meumann's dictum (following Spencer) as to the need for abundant concretion in the early stages of children's studies. The doctrine is undoubtedly a good one, but in England, at any rate, arithmetical work in elementary schools has shown some of the evils of over-concretion, which, at certain stages in the development of knowledge, can be almost as serious an error as over-abstraction.

Chapter x.—Das Gedächtnis—is a slight sketch in which the author refers the reader to Meumann and Offner for more extended treatment. It is of interest to pedagogy that Groos seems up against the view of Lay, who laid so much stress on the motor element in the teaching of spelling. In chapters xi. and xii. there are some interesting references to the over- and under-estimation of long and short lines, and of obtuse and acute angles; to the errors due to the suggestive influence of questions; and to the general tendencies of children to exaggerate.

Chapter xiii. deals with apperception—an 'ambiguous' and 'fateful' term. Possibly some further discussion of the nature of Interest, which is alluded to, might well have found a place. A right understanding of this concept might do much to help teachers; and their experience is such as to render a close discussion of it really profitable to them.

The illusions and feigned beliefs of children (chapter xv.) are similarly based psychologically to those of adults. They classify and interpret, like the rest of us, according to their knowledge. "Es ist wirklick erstaunlich, wie gering die Zahl der Vorstellungen, Gefühle und Tätigkeiten ist, die ein normaler Mensch von heutzutage zu erleben und zu vollziehen Gelegenheit hat."

Chapter xvi.—Das Verstand—a long and important chapter—deals with Concepts, Definitions and Judgments, and contains some interesting observations on children's definitions and children's reasonings. The book concludes with a chapter—the longest in the book—on the Influence of Feeling and Emotion. Are we

entitled to look upon the concurrence of pleasurable feeling and biological advantage to the individual as a verified generalisation? Much in Education depends upon the decision of this debatable question. It is doubtless true that education along the lines of proficiency is not only pleasurable to the individual educated, but also profitable socially; we need to move much further in this direction with no uncertain steps; but there *are* tendencies, whose gratification, though pleasant to the individual, may be harmful to him and be disadvantageous socially.

W. H. Winch.

VII.—NEW BOOKS.

A Philosophical Study of Christian Ethics. By G. F. Barbour, D.Phil. Edinburgh: W. Blackwood & Sons, 1911. Pp. xiv, 440.

The first seven chapters of this book, amounting to about one-half of the whole, were accepted as a thesis for the degree of Doctor of Philosophy by the University of Edinburgh. These chapters, Dr. Barbour tells us, have undergone some revision, and six new chapters have been written. The author has also added a number of important notes supplementing his treatment of points in the text. The volume is well indexed and the proofs have been carefully read.

There is quite room for a discussion of Christian Ethics on the lines here followed. Treatises on the subject, if numerous, are mainly theological in their standpoint, and the philosophical problems are passed lightly over. The present work is an attempt to bring the concepts of ethical thought into a vital relation with the spirit and ideals of the Christian life; and the writer is fully qualified for his task: he is not only well versed in ethical philosophy, but he has made a careful and sympathetic study of the literature of the New Testament. The present reviewer is happy to find himself in general agreement with Dr. Barbour's conclusions, and his book should be as interesting to the theologian and religious teacher as to the philosophical student. It is marked throughout by full knowledge, great lucidity of thought and expression, and by a fine spiritual tone.

In the opening chapter, entitled "The Synthetic Character of Christian Ethics," the writer seeks to show that the Christian conception of moral excellence is essentially synthetic, a union of contrasted virtues in an organic whole. Christian character, as we see it in Christ, is a genuine blending of courage and gentleness, severity and mercy. And while Dr. Barbour recognises in Plato's *Republic* a discernment of the synthetic nature of virtue, he is disposed to contrast somewhat sharply the Greek and the Christian conceptions of moral good. The doctrine of the Mean, we are told, "seems to lay the chief emphasis on the element of avoidance in the guiding of the moral life" (p. 5); and again: "The difference between Greek and Christian ethical thought is rather that, while both aim at a positive result, the result is in the former case essentially limited and lacks the wide sweep of the Christian ideal" (p. 37). This stress on the negative and limited aspect of Greek ethics—though afterwards modified in a note where the positive side is recognised more explicitly—is somewhat exaggerated. Limitation and exactness of determination will always be involved in the fulfilment of vocation in a concrete situation, in 'doing one's own business,' as Plato put it. Dr. Barbour of course is fully justified when he insists on the inward, spiritual and expansive character of the Christian ideal of goodness. And yet, just because that ideal was loosely related to the existing structure of society, the relation of the Christian to the social system has been variously and not always consistently conceived. Still we may hold that difficulties in this direction have been fully com-

pensated for by the freedom and universality of the Christian spirit in the service of the ideal. Two excellent chapters on the Value of the Individual follow. The tendencies, due to physical science and economic causes, which minimise the importance of the individual are pointed out, and it is shown how these can be corrected by philosophical thought and by Christian teaching. We may remark in passing that, while the Platonic theory of immortality may have had some slight influence on the Christian view of the worth of the individual, the ideas on the subject associated with Orphism and the Mysteries deserve more than a bare mention in this connexion.

In his chapter on the "Philosophical Doctrine of the Common Good" Dr. Barbour's statements are substantially based on the theory of Green on this subject. Setting out from the fact that Christianity demands a sphere of Common Good beyond the region of competition, he inquires how far this demand can be justified on philosophical grounds. Obviously the Good so conceived cannot be found among external things: it must lie in man himself, in character, in goodness as an inward principle. The Aristotelian *εὐδαιμονία* still implies the possession of some external goods, and the writer concludes that the Hellenic ideal, even though it emphasises the social character of the Good, is not wholly raised above the region of competition. On the other hand, Green's doctrine of the Common Good, or the Good Will, has met the same criticism that was urged against Kant's theory. The late Prof. H. Sidgwick, and after him, Dr. Rashdall, have objected to Green's doctrine that it is purely formal: in order to reach universality it has sacrificed content. Dr. Barbour, in replying to Sidgwick, denies that the Good Will, or what Green terms "the settled disposition on each man's part to make the most and best of humanity in his own person and the person of others," is purely formal; for it necessarily expresses itself in action. "We are thus led to the conclusion that on the one hand the Good Will must become operative in the external world and that the form of its operation must depend on material conditions, and on the other that the idea of the Common Good is wide enough to embrace the most varied forms of human excellence and activity" (p. 129). Dr. Barbour recognises how complex is the problem of realising the Common Good under modern conditions; but he does not solve the opposition of egoism and altruism by suggesting that somehow finite selves are ultimately identical, though he postulates a "vital unity of the individual and the community". He says truly that the complete realisation of the Common Good lies beyond the present order of experience. I do not think however the author succeeds in defending the Good Will from the charge of formalism. For when you pronounce one will to good better than another, it must be with reference to the way in which it works itself out: in other words, you cannot exclude the consequences from the complete conception of the Good. Again, while we may admit that Art, in virtue of its universalism, is a contribution to the social Good, it is not easy to see how, as our author says, this is a common Good which all members of society have an equal opportunity of sharing. Surely the means and leisure which make possible the development of artistic tastes on the part of some, indirectly diminish the same possibilities for others. In the following chapter, which treats of the "Common Good in the New Testament," the writer finds there "the two aspects of the Good as inward and outward, as independent of outward circumstances and as making them the instruments in its own development and expression" (p. 160). Concerning Christian Universalism he concludes that it asserts an ideal, points to a potentiality, and sets a task.

The chapter on "The Kingdom of God, Present and Future" will be of special interest to students of New Testament ideas who are in touch

with current controversies. The Kingdom of God is at once a gift and a task, *Gabe und Aufgabe*. We can distinguish three aspects of the Kingdom, the spiritual, the ethical, and the eschatological. Dr. Barbour justly criticises the separation of the ethical from the eschatological element in Christ's teaching, and the attempt to make the latter the key to the whole. The well-known book of Schweitzer, for instance, is a *tour de force*, and leaves much unexplained. Dr. Barbour accepts the view that the eschatological side of Christ's teaching was adopted from the thought of the time, and made the outward form for an ethical and spiritual content. This conception is certainly nearer the truth than the other. Still there are one or two passages whose authenticity we do not seem entitled to deny, and they do not lend themselves to an ethical interpretation. This is a difficulty which deserves at least to be recognised.

For lack of space I must pass over the judicious treatment of the place of "Reward in Moral Philosophy and in the New Testament," but I would direct attention to the excellent chapter on "Moral Continuity and New Beginnings". Here the influence of Green is much less apparent; the author has learned something from Lotze, Eucken, and Bergson, and the facts of conversion and spiritual regeneration have weighed with him. "To connect every stage of the inner life with similar though less developed stages in the past, to see in every state of the will and feeling the resultant of forces which have been present from the first—what is this but to deny the possibility of any initiative, and hence of any true freedom or personal activity?" (pp. 264-265). Hence over against continuity must be set the complementary truth of spontaneity: it is equally true that a man shall 'reap as he has sown' and that for the regenerated soul 'old things are passed away'. I wish, however, the writer had made it more clear how he reconciles spontaneity with continuity, for he is quite aware that it is not possible to sacrifice either principle. It seems to me we can only do so if we recognise that, while the new beginning is more than the outcome of the past, it still stands in relation to real possibilities in the character of the individual.

In his concluding chapter on "The Natural and Spiritual Order" the author connects, in an interesting way, the religious conception of a spiritual order which supports and finally penetrates the natural order, with the contrast in Plato and in Kant of the phenomenal and the intelligible world. The antithesis of the natural and the intelligible, more especially in Kant, is too rigid. The Christian idea is rather of a Reality at once immanent and transcendent, "known through the experience of the heart and conscience" and yet "never thought of as fully attained or realised". This spiritual order which penetrates and transforms the natural order is the Order of Love.

Dr. Barbour has written a thoroughly good book, which is bound to prove helpful and suggestive to many.

G. Galloway.

The Sexual Life of the Child. By Dr. Albert Moll. Translated from the German by Dr. Eden Paul. London: George Allen & Co. Pp. 340. Price 15s. net.

Dr. Moll's plea that "the modern movement in favour of the sexual enlightenment of young persons renders indispensable the possession of precise knowledge of the sexuality of the child" may not receive universal acceptance, but there is no doubt that some at least of the knowledge which is set forth in this book is required by responsible instructors of youth, judges, magistrates and medical men. He shows conclusively that sometimes injustice can only be avoided by "giving our judicial

authorities the opportunity of obtaining sound knowledge concerning the sexual life of children in all its manifestations ".

Dr. Moll is a medical expert, and his material is largely composed of the reports of patients, and of other reliable information which he has been able to collect from trustworthy individuals, both men and women.

His book strikes the reader as being, on the whole, too much devoted to exceptional and pathological cases. "Opportunities for the study of the sexual life of normal persons have been comparatively rare" (p. 147). "A careful examination of the accumulated material leads to the conclusion that an early awakening of the sexual life is commoner in those with an abnormal nervous system than it is in healthy persons." The volume is therefore somewhat unsatisfactory in its treatment of the normal psychology of early sex influence in the young. It does not give sufficient prominence to, or throw much light upon, those natural and healthful manifestations of the dawning sexual impulse which it is of great importance that parents and educators should be familiar with. There are gentle and innocent sexual impulses which affect children of both sexes from the age of six upwards, and which make for cleanliness, orderliness, and a wholesome desire to excel in good qualities. An experienced schoolmaster, who has any psychological interest in his pupils, cannot fail to note the personal attractions and likings, the trimmings, adornings and strivings which characterise many children from the age of ten onwards. He must often also be struck by the varied effects which the onset of puberty produces on different children. One child will be dull, stupid, uninterested, unintellectual till about the age of fourteen or fifteen, and then will suddenly become keen, ambitious, determined. Another will at first be a bright, clever, clear-headed child, and at fifteen will begin to show signs of growing dullness, of weakening memory, of dreamy inaccuracy, and lack of application.

This volume does not, indeed, entirely fail to touch upon the various normal manifestations of sexual influence in childhood, but the treatment is not full enough. The perspective is wrong, and the exceptional bulks too largely.

Dr. Moll points out (p. 29) that two entirely distinct processes participate in the sexual impulse. "In the first place, we have the physical processes that take place in the genital organs," "in the second place, we have those higher psychical processes by means of which man is attracted to woman, woman to man". In normal sexual life these groups of processes work in unison, but it is possible in many instances to observe them in action clinically isolated from the other. Dr. Moll gives examples of the former process, which he calls detumescence, occurring even in infancy, and asserts quite correctly that it is sometimes the sole manifestation of the sexual impulse. The processes both of detumescence and of contrectation (*i.e.* attraction) may manifest themselves in childhood as associated conscious sensations, but this is comparatively rare, and by far the most common event is for the processes of contrectation to appear separately before those of detumescence. In other words, the sexual life of children is largely taken up with feelings of liking and attraction in complete isolation from any changes in the genital organs.

Dr. Moll's views upon masturbation will doubtless excite some surprise. He boldly asserts that the dangers of that habit have been greatly exaggerated, and goes so far as to deny that masturbation during childhood and immature youth is followed by disastrous physical consequences. "We possess no evidence whatever to show that those young persons who never masturbate are in after life stronger and healthier than others" (p. 182).

Where neurasthenic symptoms develop, he holds that the persons thus

affected are in many cases the subjects of severe hereditary taint, and that it is impossible to decide to what extent these troubles are due to congenital predisposition, and to what extent to their noxious habit.

On page 118 he explains that an over-development of the sexual impulse in the child is an indication of the existence of a congenital morbid predisposition.

Among the valuable chapters in the book may be mentioned Sexual Differentiation in Childhood, Symtomatology, Pathology, Etiology and Diagnosis, and Sexual Education.

In connexion with the last subject it may be worth while quoting Dr. Moll's remarks on page 111 : "The development of the sexual life begins much earlier than is generally supposed. The appearance of certain external signs of puberty is only a stage in the process of pubescence" ; and his sentence on page 248: "We have to recognise clearly from the first that in the education of the child the complete exclusion of sexual stimuli is impossible". He is strongly in favour of sexual enlightenment of the young, "the importance of which must on no account be over-estimated" (p. 306).

On page 116, line 2, the word 'diameter' is an evident mistake for 'circumference'.

The sale of this book is limited to members of the Medical, Scholastic, Legal and Clerical professions.

JOHN EDGAR.

The Doctrine of Māyā in the Philosophy of the Vedānta. By P. DUTT SHĀSTRĪ, Ph.D., M.A. Luzac & Co., 1911. Pp. 138.

This little monograph, the work of a scholar not unknown at Oxford, is a succinct and useful contribution to the history of the terminology of Indian monistic thought. The writer has a healthy sense of the importance both of the historical method and of statistically based argument.

He claims the doctrine of Māyā as the 'pivotal principle' of Advaitism, *i.e.* Indian Monism or Idealism. This aspect in philosophy was not fully formulated till the seventh and eighth centuries A.D., but the mental evolution debouching in that systematisation may be traced for a considerable period backwards. And the object of the book is to inquire first into the documental history of the word, and then into the history of the conception to which it came to be attached. The result of the inquiry is briefly this : the idea in Māyā, as doctrine, is much older than Māyā as a philosophical term. In the Vedas *māyā* meant simply 'magic,' either as a certain *effect*, or as a *power to produce* such effects (*e.g. prajñā*). We then, in all subsequent Vedic literature, practically lose sight of the word, till the relatively *late* Upanishad, called *Śvetāśvatara*. In that Upanishad, where relatively mature philosophical ideas seem suddenly to emerge, *māyā* reappears in its Vedāntist sense of the illusion of the phenomenal cosmos.

The author leads us to expect fuller treatment of Indian Idealism than is possible in the scope of this work. And for disinterested analysis of the history of that thought there is no lack of need. We trust, when we meet with these further results, in which we wish him good speed, we may meet with, not only a continuance of the good qualities of the present prolegomena, but also with the proofs that he has outgrown two *péchés de jeunesse :* He has not quite shaken off the early mediæval etymological method—still adhered to in India and beyond—whereby a term is alleged to be derived, as it were, by a selection from alternatives,—by a process analogous to the myth of the 'Social Contract'. The alternatives are ideas that have evolved long after, and have become encrusted round

the word, the origin of which is prehistoric. I refer to the etymology of *māyā* (p. 29 f.). Again, we hope he will not drop the really interesting term 'illusion,' in favour of our modern Western 'appearance,' as he is tempted to do, nor go on trying to translate Vedic or Sanskrit expressions too readily in terms of 'Will,' as he does at present. When commencing a comparative study of Oriental and Occidental philosophy, the establishing of likenesses amid difference is natural and seductive. But what each philosophy most needs is the grip, in the other, of differences amid likeness. And the full significance of the difference in evolution which led Indian thought to choose *māyā*, and not 'appearance,' and to choose terms of cognition in action, rather than evolve a separate *volitional nomenclature*, are really full of deep interest.

Finally let him not forget that, when 'Indian thought' was really Buddhist thought—I do not mean the degenerate days of that phase criticised by Sankara—it rejected the extreme Monism that was to evolve the term *māyā*, and chose its own 'path of the Mean'. For classic Buddhist literature, *māyā* retains only its Vedic meaning.

C. A. F. Rhys Davids.

The Significance of Existence. By I. Harris, M.D. London: Longmans, Green & Co., 1911. Pp. 324.

The writer of this book is an active-minded man, interested in the problems with which he deals, and apparently hopeful that he has made a contribution to their solution. The "Significance of Existence" is certainly a large and difficult subject. Dr. Harris has some knowledge of the natural sciences, as his biological and physiological references show; but his acquaintance with the history of philosophy and its problems is evidently very meagre, and philosophical writers are rarely mentioned in these pages. As might be expected, the philosophy of the book is of an exceedingly crude description, and exaggerated and indefensible statements abound. It would neither be interesting nor profitable to traverse these statements; and the best we can do in the circumstances is to indicate the main ideas of the volume, so far as we understand them.

Dr. Harris's standpoint is thoroughly naturalistic. Sensations and perceptions are of the same nature, and emotions are more complex sensations. Sensations permanently engraved on the subject are memory, and the mind is just the store of impressions and ideas gained by experience and associated in a purely mechanical way. Nature arose from a common uniformity, in which, however, the causes and conditions of all that came to be were latent. "Out of the chemical and physical properties of matter proceed all diversity in the universe." The solution of the problem of individuality is delightfully simple: the individuality of an object is just a certain number of properties set free by favourable conditions. Dr. Harris goes on to deny that there is anything distinctive in psychical processes, and of course regards the notion of purpose as false. Functions of animal organs are due to 'principles of general physics' in their composition. Each organ performs its function solely from its innate nature, and yet we are also told that the relation of an organ to the whole is important. Dr. Harris refuses to allow any guiding power to intelligence: "Nothing in life is done by intelligence, but everything by blind instinct". We wonder if he would say that his book was produced by instinct! Having come thus far with him we are prepared to learn that the author entirely disapproves of current moral conceptions, and thinks that "religion more than any other factor in life makes man unnatural and immoral". Nietzsche has familiarised us with the idea of a 'transvaluation of all values,' but Dr. Harris goes one better

when he tells us: "Man will only become himself again when all values are swept out of existence, moral or otherwise". Man, it seems, will be on the way to become more human, when he devotes himself "to the training of his faculties to the highest pitch of efficiency". Apparently this is not reckoned a value, 'moral or otherwise'.

The reader can draw his own conclusions as to the success of this attempt to elucidate "the significance of existence". If the following are not blunders on the author's part, he has been unfortunate in his proof-reading: Pally for Paley; De Vriers for De Vries, and Veruna for Varuna.

G. G.

The Ethical Approach to Theism. By G. F. Barbour, D.Phil. Edinburgh and London: W. Blackwood & Sons, 1913. Pp. vi, 115.

This thoughtful and well-written essay should be read by all who desire a brief account of the nature and grounds of theistic belief in the form in which they appeal to a reflective mind of the present day. It may be described shortly as a fresh statement of the 'moral argument'—a plea for "defining reality in terms of value". In a previous work on *Christian Ethics*, Mr. Barbour found that the idea of a spiritual order, which he set forth there, points beyond ethics to metaphysics or theology. "Goodness is not a mere ideal, existing *in vacuo*; . . . the spiritual order represents not only the best order that we can conceive and the highest object of endeavour, but also the final truth of things." This thesis is explained and defended in the present book, not merely with knowledge and skill, but also—what is much more important—with perfect candour and with genuine insight. The theistic solution is compared throughout with the pantheistic; and the most significant argument of the book consists in the author's use of the conception of degrees of reality. He contends that this conception justifies a principle of selection, rather than the bare principle of comprehensiveness, in determining the ultimate nature of reality. "If there are indeed degrees of reality, and if there is any true end of human character or any valid teleology of human life, then these two principles must ultimately harmonise; and so the conclusion is reached that to attribute supreme reality to that which is morally best is no arbitrary hypothesis or 'pious imagination,' for any other course would in the last analysis be 'at direct variance with our proper nature'." This position may be attacked from two different points of view. On the one hand it may be held that the moral consciousness is a product of evolution and that its contents only reflect conditions which have been imposed by the needs of life in a community; and this is an old and familiar view. On the other hand there is the view, which has been brought forward with brilliant ability in recent years, that good or duty is indeed something objective, but that it is entirely disconnected with the structure of real existence. Neither of these views is ignored by the author; but I think that he does not keep the distinction between them sufficiently clear before his readers' eyes. His own argument is directed against the latter view, but only in its most general outline; and he has not seized the opportunity of subjecting it to criticism in the definite form which it has recently assumed. To have done so, however, would have involved him in the dust of contemporary controversy—from which he appears anxious to hold himself aloof. His converse, whether by way of appreciation or of criticism, is with the great historical representatives of thought—with Plato and Aristotle, with Spinoza and with Kant. This adds impressiveness to his own exposition which, it should be added, shows throughout a fine sense of moral and spiritual values.

W. R. S.

The Theory of Political Economy. By W. Stanley Jevons. With note and an extension of the bibliography of mathematical economic writings, by H. Stanley Jevons. London, 1911. Pp. lxiv, 339. 10s. net.

Jevon's *Theory of Political Economy* needs no commendation. It has now demonstrated the value of quantitative analysis, and, at the least, the convenience of mathematical statements. No doubt there remains the difficulty that, if all economic motives are (as Jevons holds) reducible to pleasures and pains, how these are to be valued mathematically—in fact, this part of the work raises all the difficulties of the "hedonistic calculus". In editing his father's book Mr. H. Stanley Jevons has performed his task with modesty and self-effacement. He has added notes and a few additions to the bibliography of mathematical economics. There are three new appendices. The first of these is written by the editor, and, in it, he endeavours to work out the implications in Jevon's theory of interest. The other two are reprints of articles by Jevons on Capital and "on a general mathematical theory of Political Economy". It is to be hoped that on some future occasion the editor will be able to publish the bibliography of mathematical economics which was begun to supplement that contained in Appendix V. Such a list would be of great advantage to students of the subject; and, if its appearance is not unduly delayed, it would perhaps appear to better advantage as an independent work. The list in the present volume shows the authorities to which Jevons had access, and to extend it would have added a great deal to the bulk of the volume, while a separate book would be more convenient to many who would have occasion to consult it.

W. R. Scott.

L'Influence de Montaigne sur les Idées Pédagogiques de Locke et de Rousseau. By Pierre Villey. Paris: Hachette et Cie. Pp. 270.

The author has made a special study of the writings of Montaigne and their influence. This is one of several books which he has either already published or which he is preparing on various aspects of his subject. The volume is full of careful and scholarly criticism, and constitutes an important chapter in the story of the evolution of modern educational theory. M. Villey is fully aware of the difficulty and delicacy of analysing the influences which have affected a writer, and making a just estimate of their importance. He brings no charge of plagiarism against Locke or Rousseau, and disclaims any desire to rob either of his claim to originality. But he does succeed in showing how the fertile seed sown by the great essayist germinated and developed in the notable writings of these two authors. The fact that the fruit in each case was so different and so unexpected does not trouble M. Villey. "Cela s'entend, les idées ne germent, comme les semences, que dans un terrain disposé à les recevoir. Quelquefois, le terrain n'offre que parcimonieusement les sucs necessaires, quelquefois il en est saturé si bien que le germe, rapidement levé, produit des fruits inespérés." He holds that Montaigne's essays, falling on the rich and specially prepared soil of Rousseau's mind, led to the harvest of pedagogical theory in the *Émile*.

"Il existe, au reste, bien des manières d'accepter des idées. Celle de Rousseau est des moins passives; il réagit, il critique, il rejette avec force, il adapte, il transforme."

On page 265 in summing up our author shows that Montaigne, Locke and Rousseau all laboured at the same task. They took up the work of Rabelais and defended the rights of "la bonne nature" against the educator.

Each of them had to insist anew that the real end of education is "la formation de l'homme et son adaptation au milieu social". Each of them re-asserted that belief "à tour de rôle, chacun à sa manière". Each of them reflected in his writings the tendencies of his environment and his personal pre-occupations.

But in spite of all differences, M. Villey finds it easy to recognise in their theories the essential lineaments of one doctrine.

JOHN EDGAR.

Abriss einer Geschichte der Psychologie. Von MAX DESSOIR. Heidelberg, 1911. 8vo. Pp. xi, 272. Price, 4 M.

This is one of the series of psychological monographs initiated by the late Prof. Ebbinghaus and Prof. Meumann. The author, the distinguished historian of modern German Psychology, has been confronted by great difficulties. It may be doubted whether a serviceable account of the history of European psychology in general is possible in a work of this size. For a sweeping survey of the main movements of psychology, half the number of pages might suffice; but for a tolerably complete account of the thought of individual writers, far more are necessary. Moreover, only the most eminent writers can find a place at all, and the result of this is sometimes historically misleading, for a writer is not always best acquainted with those of his predecessors who seem to later generations most eminent, but may know them through some comparatively unimportant intermediary. Suarez, for example, whom Prof. Dessoir does not mention, and who does not, perhaps, deserve mention for his own sake, was certainly better known to some of the seventeenth century writers than his more distinguished originals. Again, it is necessary in a book of this size to omit writers, however interesting, who stand off the main line of development; thus nothing is said of Fourier's bold attempt to construct a practically useful social psychology.

Nevertheless, Prof. Dessoir has been as successful as any one well could be in making so short a volume readable and useful. He begins by distinguishing three "roots" of psychology—first, the experiences of dreams and death which, under religious influences, give rise to theological or metaphysical "Psychosophy"; secondly, the individual experience of activity which, through the attribution of all vital force to the soul, and the attempt to find its seat in this or that organ of the body, gives rise to psychology proper; and, thirdly, observation of differences of temperament and character, from which arises "Psychognosis" or the reflective study of character. This last tendency is important for practical life and in literature, but as in the main it has developed independently of the others, Prof. Dessoir sketches its history from the Gnomic poets down to Amiel and Bahnsen in an introductory chapter which is one of the best in the book.

From first to last—that is, to Fechner, with whom this history ends—the fortunes of Psychosophy and Psychology have been intertwined, and their complicated connexions and interactions are followed and set forth in a very masterly manner. It is unnecessary to go into details; on a book of this kind every reader will make his own criticisms. One would have liked a fuller account of the greater scholastic writers; the verdict on Spinoza as a psychologist seems ungenerous; the French psychologists deserved more space, some of the minor German writers a little less; in a history which really ends about 1870 it was a mistake to include James at all. On the other hand every reader will find passages which seem to

him particularly meritorious; those on the Mystics, on Vives, on Kepler, on Malebranche, and on Herbart are examples. But in general it is, as would be expected from its authorship, a very good book.

T. Loveday.

Lehrbuch der Evangelischen Dogmatik. Von Friedrich Nitzsch. Dritte Auflage bearbeitet von Prof. Lic. Horst Stephan. Tübingen: Verlag von J. C. B. Mohr. Erster Theil, 1911; Zweiter Theil, 1912. Pp. xxiv, 750.

This is a large and full book, and an adequate review of it would fill a number of pages. In a philosophical journal like Mind it is not possible to deal thus at length with a purely theological treatise. It must suffice therefore to offer a few general remarks on the character and contents of the work.

German books on Dogmatics are very numerous, and range from the slender *Grundriss* to the elaborate *Lehrbuch*. Among this varied company the present book has won for itself an honourable place. Prof. Nitzsch, the original author of the work, was latterly Professor of Theology at Kiel, and he died in 1898. The first edition of his *Evangelische Dogmatik* was published in 1889-1892, and the second edition in 1896. This edition, the third, has been prepared for publication by Prof. Stephan of Marburg, and he has made a good many alterations and additions. These, he tells us in the Preface, have been mainly of three kinds; statements have been completed and brought up to date where necessary, and some of the historic material has been omitted where it had lost its interest or was no longer relevant; other parts have been revised and augmented in view of present needs. Finally the editor has in some instances compressed the treatment and in other cases rearranged it, in order to give a better view of the subject-matter. These changes, the editor informs us, amount to about a third of the whole work. In the result it is often not easy to distinguish between Prof. Nitzsch and Prof. Stephan, and the book must be judged for itself rather than as the production of a single author.

In contrast to Philosophy of Religion, Dogmatics, we are told, has a practical basis and aim; its function is to set forth and expound the substance and meaning of Christian Faith. The book falls into two parts, the first dealing with the Principles of Dogmatics and the second with Special Dogmatics. The earlier division, besides an Introduction, contains two sections, the one explaining the "Nature of Religion," and the other the "Nature of Christianity". The sections of the second part deal with Anthropology: Theology: and Christology.

The late Prof. Nitzsch belonged to the school of 'mediating theologians' (*Vermittlungstheologen*) who stood between the advanced liberals and the conservatives. Though maintaining his independence, like other theologians of his class he was not without sympathy for the Ritschlian movement. He insists on the need of being in earnest with evangelical piety, and holds that "Christ in realising the kingdom of God has become the mediator of salvation". Hence Nitzsch's standpoint is definitely distinguished from that of speculative theologians like Biedermann, Pfleiderer, and A. Dorner, who refuse to identify the religious ideal with a historic person. On the other hand Nitzsch is not anti-metaphysical in the sense of Ritschl, and he believes that the nature of religion in general can cast light on the Christian religion. The preliminary discussion of the "Nature of Religion," we may add, is a good and well-balanced statement, though the editor has not brought it quite up to date. For

instance, some reference might have been made to the question of the relation of magic to religion.

The book appears to us, so far as we have been able to examine it, a very full and careful treatment of the subject. The editor has evidently taken much pains to make it adequate to the wants of the present-day student of theology.

G. G.

La Filosofia Contemporanea. Da Guido de Ruggiero. Bari: Laterza & Figli. 1912. Pp. 485. Price, L. 6.00.

This work is of a kind that is urgently required at the present moment, in English as well as in other languages, to give an idea of the manifold movements of modern philosophy in different countries, and a clue, so far as a clue is possible, to such unity as underlies them. As the author points out, philosophy is no longer cosmopolitan; it is national; that is to say, there is quite a different aspect in the philosophical works produced in different countries, and there is no real influence from one country upon another. Yet underlying the external differences, there is an identity of problems, a similarity of solutions, and especially a progressive development in the different countries along similar lines. Two generations have seen the decadence of the classical idealism, the rise of naturalism, followed again by the dissolution of naturalism, and the resurrection of idealistic speculation, alike in Britain, in France, in Germany and in Italy. The present volume seeks to trace these currents of thought in detail, and to disclose what the author regards as the common basis and common point of convergence in them. On the whole, he has succeeded in his difficult task, although the clue which he offers is at first sight a rather startling one. It is, briefly, that the spirit of the Hegelian philosophy has dominated the whole movement, unconsciously to many of the authors concerned. It is, however, not the Hegel of the standard histories of philosophy, but Hegel as the apostle of immanence,—the immanence of thought in life and in nature.

The book is in four parts, dealing respectively with German, French, Anglo-American, and Italian contemporary philosophy. The resurrection of idealism has been least marked in Germany, and most pronounced in France, but in England also it may be regarded as the dominant note of the present time. In German philosophy we begin with the point at which the decline of post-Kantian idealism sets in; we are shown the rise of materialism with its socialistic and anti-religious tendencies, issuing finally in what has since been called "naturalism"; a chapter is given to the empirical movement, another to the Neo-critical philosophy and its off-shoot, vitalism; one to the psychological movement, and the last to the convergence of these various movements in the "Metaphysics of Experience". Perhaps the most attractive part to an English reader is that on French philosophy (Part II.). The first chapter shows how the Philosophy of Liberty arose through positivism out of the eclectic philosophy of Cousin. There is a chapter on the phenomenalism of Renouvier, another on the new forms of positivism, the chief subject being Weber, another on Boutroux and Milhaud, Poincaré and Bergson; one on the movement from positivism to Platonism, in sociological writers such as Tarde and Fouillée; another on the philosophy of action and modernism —the religious movement in its relation to philosophy, and we have even a section on Sorel and syndicalism. The author is able to make out a strong case for his view that the special characteristic of this modern French philosophy is its direction, partly conscious, partly unconscious, towards Hegelian idealism. Thus, in Bergson, the motive underlying the prominence

given to intuition as opposed to intellect and reason; in Boutroux and Milhaud, the criticism of logical standards or principles of science, with the corresponding assumption that the thought or intelligence of the scientist is creative of truth and does not merely reproduce a truth which exists once for all in reality; the conception of reality as action, as creation, for example in Loisy's insistence on the idea that religious truth is not from the first a ready-made and completed thing, but is living and therefore changing, developing through the "absolute immanence" of thought in human history, individual and general; all these are represented as Hegelian in tendency.

In Part III. a similar movement is shown in England and in America. We have the rise of empiricism and naturalism, from Hamilton and Mansel through Mill, Bain and Spencer to Clifford, issuing in the Pragmatism of James, Dewey and Schiller; on the other side the development of idealism in Stirling, Green, Bradley, Caird, and the present day representatives, McTaggart (from whose name the Mc is unfortunately omitted), Royce and Baillie. In this movement the relation to Hegel is of course much more obvious than in France or in Germany, since all of the second group of writers have made him their starting-point, but even in Pragmatism, de Ruggiero is able to point to a Hegelian influence.

In Part IV. the first chapter gives a sketch of the Renaissance philosophy in Italy, and the revival of its spirit in Rosmini, etc.; the second shows the general trend at the end of the nineteenth and beginning of the twentieth centuries, the new positivism of Ardigo, the monism of Varisco, and Neo-Kantianism; while the third chapter deals with Spaventa and other Hegelian idealists, and the literary and economic outgrowths of the movement.

The outcome of the work is that in modern philosophy we have the completion of a process which began in the criticism of Kant, and is now culminating in the complete disappearance from serious philosophy of the idea of reality as transcendent to thought, the victory of the conception of thought as immanent in reality, and of experience as not merely a reproduction or copy of reality, but as productive or creative of reality. So the criticism of science has brought us to see the true centre of reality not in fixed or fundamental laws, but in the living human thought (p. 451). From the Hegelian system, that system which at one time seemed so remote from life, there has sprung up, almost everywhere, a movement towards the identification of philosophy with life.

The work may be strongly recommended, not only for the interest of its subject, and the accuracy and range of knowledge displayed, but also for its critical sense and the clearness of its style.

J. L. McIntyre.

Corso Sistematico di Pedagogia Generale. Da Giovanni Marchesini. Second edition, enlarged. Turin, Rome, etc.: Paravia e Comp. Pp. 356.

The first edition of this book was published in 1907 and was favourably reviewed in Mind. The author has revised the whole volume and improved it sometimes by judicious abbreviation, sometimes by amplification and sometimes by modifications to meet the requirements of recent research or criticism. He has also added further notes in the Appendix, and has provided a useful index. The book is well worth the careful attention of students of Systematic Pedagogy.

John Edgar.

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F. Plaut, O. Rehm, H. Schottmüller, *Leitfaden zur Unterschung der Zerebrospinalflüssigkeit*, Mit 5 Figuren im Text und 21 teilsfarbigen Tafelen, Jena, Fischer, 1913, pp. vii, 149.

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VIII.—PHILOSOPHICAL PERIODICALS.

Philosophical Review. Vol. xxi., No. 3. **A. Lalande.** 'Philosophy in France in 1911.' [Discusses the French papers read at the Bologna Congress: Rauh's *Études de morale;* Fouillée's *La pensée et les nouvelles écoles anti-intellectualistes,* and Berthelot's *Un romanticisme utilitaire, étude sur le mouvement pragmatiste;* Berr's *La synthèse en histoire.*] **J. E. Creighton.** 'The Determination of the Real.' [Argues, in the light of the history of philosophy and against the theories of pure objectivism and pure subjectivism, that "Knowledge must exhibit and define the differences between the mind and things, at the same time that it exhibits their aspect of identity". The doctrine of identity in difference enables us to understand how the mind can know the object without introducing some foreign element into the knowledge of it, and also permits us to discard the theory of representative knowledge, without rejecting the truth which that theory contains. It has two methodological consequences: the process of determining the nature of the real world must be accompanied by and involve the criticism of the categories of knowledge; and philosophy cannot begin by ignoring consciousness and dealing only with objects and their relations.] **A. O. Lovejoy.** 'The Problem of Time in Recent French Philosophy. II. Temporalism and Anti-intellectualism: Bergson.' [Bergson agrees with neo-criticism in his radical temporalism; in his ascription of the primary place in metaphysics to the Zenonian paradoxes; and in his belief that the attributes of time have been confused with those of space. His paradoxical conception of the nature of real time makes him an extreme anti-intellectualist; though there are reasons which have prevented his own realisation of the fact. His view rests upon four main arguments: that to represent two or more units simultaneously means to think of them as simultaneously juxtaposed in space; that rhythm is perceived as a qualitatively definite unity; that the continuity of time implies its logical inconceivability; and that time can as little be a quantity composed of moments as motion is a quantity composed of positions. From the beginning, however, Bergson has had another and an essentially quantitative conception, "and it is in his development of this second idea of time that the profitable and important part" of his philosophy appears to the writer to consist. Whether the new idea involves anti-intellectualism he has himself not shown, and we must further inquire.] Discussion. **J. E. Creighton.** 'Consistency and Ultimate Dualism.' [Sheldon's argument for the consistency of realism and idealism is unsatisfactory because he regards identity and difference as external to each other, or at least as not interpenetrating and organic. The best comment on his position is the history of philosophy since Kant; for the main result of this period has been the explication of the concrete universal and its application to the problems of experience.] **E. B. McGilvary.** 'Realism and the Eco-centric Predicament.' [According to Dewey, Perry's ego-centric predicament is one from which the epistemological realist cannot extricate himself; the best he can do is to ignore it. The writer argues that it may be avoided by any one who refuses to use the

method of which it is the necessary result.] **H. S. Shelton.** 'Dr. Jordan and Spencer's Unknowable.' [Spencer himself declares that the rest of his philosophy is independent of the Unknowable.] **E. Jordan.** 'Reply.' [The independence is, however, a logical fission; and the Unknowable must be considered on its merits.] Reviews of Books. Notices of New Books. Summaries of Articles. Notes.

JOURNAL OF PHILOSOPHY, PSYCHOLOGY AND SCIENTIFIC METHODS. ix., 23. **J. Erskine.** 'Kinds of Poetry.' [Argues that lyrical, dramatic and epic poetry correspond respectively to man's attitude in meeting the present, the past and the future.] **A. O. Lovejoy.** 'Present Philosophical Tendencies.' [The first part of a very detailed, thorough and on the whole damaging review of R. B. Perry's book, completed in ix., 25. This section deals with Perry's criticism of Naturalism and his exposition of James.] ix., 24. **J. Dewey.** 'Perception and Organic Action.' [An important, detailed, and well documented study of Bergson's theory of perception, which is deserving of attention, not only in itself, but as the first authoritative criticism of Bergson's theory of knowledge from a thoroughgoing pragmatist standpoint. Without questioning Bergson's initial thesis that "perception is relative to action," Dewey asks "*how* it is relative," and what are "the distinguishing traits of action," and suggests that there is in Bergson an "alternation between two factors which must operate contemporaneously, not alternately," *viz.*, between "real and possible action". It is then shown that "the traits that are alleged to demarcate perception and the objective material with which it deals from a reality marked by genuine presence of temporal considerations" must disappear. This necessitates a 'revision' of "Bergson's whole theory of time, of memory, of mind, of life as things inherently sundered from organic action," and carries us to a point where "reference to useful action ceases to mark an invidious contrast with reality," and where "the need of any rival mode of knowledge, called philosophical, becomes doubtful". Thus "were it not for the survival in the court of last resort of the old idea of the separation of knowledge and action, Bergson's special analyses would point to very different conclusions from those that constitute his official epistemology".] **K. Schmidt.** 'Opposition and the Syllogism' [cp. ix., 15.]. ix., 25. **A. O. Lovejoy.** 'Present Philosophical Tendencies,' II. [Keenly criticises Perry for failing to meet the dialectical argument for idealism and ignoring the evidence (from dreams, illusions, etc.) that the consciousness-relation is sometimes 'constitutive'.] **M. T. McClure.** 'A Point of Difference between American and English Realism.' [The latter makes consciousness an entity among other entities, the former treats it as a relation.] **F. C. S. Schiller.** 'The Problem of Formal Logic.' [A reply to the review in ix., 17, which complains that Eastman has failed to note the sense in which 'Formal Logic' was attacked, and in general misrepresented the argument, and doubts whether he can really hold the pragmatism he professed but gave away completely.] **M. Eastman's** 'Rejoinder' reads very like a confession of incompetence. ix., 26, contains a Discussion of the American Philosophical Association. **N. K. Smith.** 'How far is Agreement Possible in Philosophy?' [The real reason why equally competent philosophers arrive at diametrically opposite results is not in temperament so much as in the complexity of the problems and personal limitations.] **W. B. Pitkin.** 'Is Agreement Desirable?' [The prior question should be raised whether there are any fundamental philosophical issues at all.] **K. Schmidt.** 'Agreement.' ["Many solutions of a given problem are possible; many systems of logic."] x., 1. **F. J. E. Woodbridge.** 'The Deception of the Senses.' [Urges "(1) that the deception of the senses

is significant not for cognition, but for action; and (2) that speculative theories of knowledge are independent of any empirical evidence that the senses deceive," insisting that "a theory of knowledge in the philosophical sense is something quite different from a theory of knowledge in a logical, scientific or pragmatic sense". Whether this is not a reduction to inanity of the 'philosophical' theory of knowledge is not discussed.] **G. D. Walcott.** 'The Essentials of a First Course in Ethics.' [The author's course begins with an 'epitomised history of philosophy' and finishes with Sociology.]

British Journal of Psychology. Vol. v., part i. **Knight Dunlap.** "The Hipp Chronoscope without Armature Springs." [Describes method of working without springs and its advantages: also arrangement of chronoscope and fall-hammer for tests.] **C. W. Valentine.** 'Psychological Theories of the Horizontal-Vertical Illusion.' [Illusion found to be as great, or greater, when only one eye is used as when both eyes are used, thus disproving theory that illusion is due to contrast with oval field of vision; amount of illusion for two eyes sometimes a mean between amounts for each eye taken individually, or it may be less than that for either eye. Influence of a physiological factor suggested by difference between amount of illusion for the right eye and that for the left in several subjects. Increase in size of lines does not necessarily lead to increase in amount of illusion; in some cases a maximum amount of illusion is reached with a given length of lines, after which a further increase of the lines leads to a decrease in the amount of the illusion. Lipps's æsthetic theory of the illusion discredited by fact that there is entire absence of correlation between results of tests upon the horizontal-vertical illusion and those upon an illusion having, according to Lipps's, a similiar æsthetic cause. Practice in some cases *increased* the amount of illusion.] **E. O. Lewis.** 'The Illusion of Filled and Unfilled Space.' [Experiments with Hales's tachistoscope. Illusions greater with momentary than with prolonged observations, thus discrediting Wundt's general eye-movement theory of optical illusions. Illusion disappears with practice with prolonged observations, but remains unchanged with momentary observations. Maximum illusion found where filled space has eight divisions. Amount of illusion too great to be explained by curvation of retina (Hering), and physiological theory unlikely in view of disappearance of illusion with practice. Lipps's theory of "expansive tendencies" discredited by fact that illusion is so pronounced with momentary exposures. Discreteness of the various parts of the filled space found to be an essential factor in the illusion, giving rise to a "feeling of manifoldness" which causes an exaggerated judgment of extensity. The illusion increases with number of divisions of the line until these become too small to claim independent attention. The parts are then apprehended in groups and illusion is lessened.] **Bernard Hart** and **C. Spearman.** 'General Ability, its Existence and Nature.' [Presence of a general factor in intellectual work (as shown in school work, mental tests, etc.) proved by the approximation to unity of the coefficient of correlation between vertical columns of various tables of coefficients established by different investigators, *i.e.* the "correlational coefficient between series of correlational coefficients" is the criterion as to presence or absence of general factor. Critical discussion of previous suggestions as to nature of general factor. Fundamental opposition observed between the general factor and "mechanisation of habit". Explanation of general factor as intelligence, power of synthesis, or attention, found unsatisfactory; authors suggest that it is the common factor of energy. Each form of mental work involves this general factor and also some factor specific to itself and to very similar forms of work. On the physiological

side the general factor is represented by the general energy of the whole cortex, while the specific factor corresponds to the activity of the particular system of cortical neurons required for that particular activity. Parallels supported by fact that evidence of solidarity of nervous system is greatest at highest levels. There follow a discussion of bearings of this doctrine of general factor upon psychological theory and practice and a mathematical appendix.]

THE INTERNATIONAL JOURNAL OF ETHICS. Vol. xxiii., No. 1, October, 1912. **E. Benjamin Andrews.** 'The Decline of Culture.' [Culture, the comprehensive appreciation of the non-economic values, is undergoing eclipse. Its obscuration is observable in every department of life, in politics, in commerce, in science, in literature, in the fine arts. A diagnosis of the malaise with special reference to American society shows the influence of four sets of factors: (1) the country's extraordinary increase in wealth; (2) the extension of communistic socialism; (3) perverted educational theory and practice; (4) devitalising views of the world, *e.g.* atelic biological ethics.] **J. W. Scott.** 'Originality and Culture.' [Present-day life is marked by disorder and distraction. It is a loose aggregate of fragmentary wants and partial satisfactions. Overwhelmed in details, we look almost in vain for organic connexion, wholeness, a universal. But personality involves the spirit of wholeness. Personality is the individual's centralised experience of the world. Its originality depends not on its separateness from others, but on its unity with them. Originality is not eccentric culture, but superfocussed culture.] **John E. Boodin.** 'The Identity of the Ideals.' [In form, the ideals of truth, beauty and virtue are identical. They are differentiated by their content. Historically, attempts to maintain either the unity or the difference of the ideals have been vague and confused, owing to failure to hold fast the distinction between form and matter. In form, all ideal activity involves four characteristics—unity, harmony, simplicity, universality. In these implications all ideals are at one. But as realised, the ideals are differentiated. "Science, art and morality are different in the concrete, as truly as they are identical in the abstract." An ultimate unity exists and is worshipped as God.] **Helen Wodehouse.** 'The Value of Social Psychology.' [Social Psychology emphasises the complexity of human nature. It collects, develops, formulates and enforces the lessons of practical experience, and thus performs a threefold function. (1) It substitutes adequately grounded theories for rash popular generalisations. (2) It inculcates a methodical habit of mind. (3) It will guard against a mistaken political philosophy, and give a juster basis for political enthusiasm.] **Archibald A. Bowman.** 'The Elements of Character in Tolstoy's Weltanschauung.' [Tolstoy's Weltanschauung is directed critically upon the order which he himself exemplifies. He belongs to a movement of Enlightenment, but is a non-representative figure therein. His passion for mere *being* leads him to take a receptive interest in the particularity of life. But inwoven with this is a unifying spiritual attitude of reflexion. The interaction of these two attitudes (which arise out of a "common fund of sensibility") is specially manifest in his theory of Art. His general affinities are with Kant rather than Hegel, with Rousseau rather than Diderot.] Book Reviews. List of books received.

ARCHIVES DE PSYCHOLOGIE. Tome xi., No. 4. **E. Yung.** 'De l'insensibilité à la lumière et de la cécité de l'escargot (Helix pomatia).' [A long series of differential experiments, made with groups of adult and young snails, in full sunlight, in clear daylight, in the shade, with and without removal of the eyes, proves conclusively that these animals are

not in the least degree dermatoptic, and that their eyes have no visual function; their movements are regulated by impressions of touch, temperature, and smell.] **A. Descœudres.** 'Les tests de Binet et Simon, et leur valeur scolaire.' [Test of the Binet-Simon tests of 1908 upon twenty-four children, one clever and one dull boy and girl from the six classes of the Geneva primary school. For the years seven and eight, the tests give a clear differentiation of good and bad students; but they are easy; a child of seven who passes the tests for eight is simply normal. For the years nine and ten the results are unsatisfactory. For eleven and twelve they are better, though not so clear-cut as for seven to eight; the tests now are too difficult, though probably not a full year in advance of age.] **A. Descœudres.** 'Exploration de quelques tests d'intelligence chez des enfants anormaux et arriérés.' [Test of fourteen children by fifteen tests, six taken from the Binet-Simon list of 1908, and nine derived from other sources or invented for the present purpose. Not only does the average outcome of the tests correlate well with the institutional rating of the children; but, in one case, the tests point definitely to an error of rating, due to the insufficient knowledge of the teacher, and confirmed by later experience. The value of the tests, determined as correlation of ranking order in the single test with the same order for the tests as a whole, is greatest for reasoning, less for imagination, less still for attention and memory; the writer, however, lays more emphasis upon her method than upon her concrete results.] **E. Claparède.** 'Alfred Binet, 1857-1911.' Bibliographie.

Zeitschrift f. Psychologie. Bd. lx., Heft 4. **C. M. Geissler.** 'Mimische Gesichtsmuskelbewegungen vom regulatorischen Standpunkte aus.' [The movements of the facial muscles not only express emotion and thought; they serve also, whenever a high degree of energy is developed, to supplement or regulate action or consciousness. Contraction of the *m. frontalis* reacts upon perception, ideation and motor discharge in the sense of an expansion of the internal or external field of regard; contraction of the *m. superciliaris* aids concentration or inhibition; the muscles of the oral region help, according to their set at the moment, to narrow or to widen the sphere of organic activity. The three groups of muscles are therefore centres of tension, organs subsidiary to attention and motility, aids to the great function of adaptation.] **G. Tichy.** 'Über eine vermeintliche optische Täuschung.' [Wundt declares that, if the Poggendorff figure is laid out horizontally, and the central parallels are replaced by vertical strokes, the illusion is inverted. Experiments, critical and constructive, made with observers of ages from twelve to forty-five, show that the illusion maintains its direction through all possible variants of the figure. Direction is correctly estimated; but the eyes tend to take a straight course across the central parallelogram, because this mode of apprehension is the most usual: explanation must therefore be physiological, in terms of economy of work of the ocular muscles.] **W. von Bechterew.** 'Über die Hauptäusserungen der neuro-psychischen Tätigkeit bei objektivem Studium derselben; zur Psycho-Reflexologie.' [Programme and report of the objective study of neuro-psychical function in the author's laboratory at St. Petersburg. The point of departure is the associative reflex, of which there are many kinds. Thus an associative-motor reflex may be set up if electrical stimulation of the sole of the foot, arousing the ordinary reflex, is repeatedly accompanied by an indifferent stimulus (light, sound); presently this stimulus alone touches off the reflexive movement. The study of such reflexes throws light upon excitation, inhibition, release; upon compensatiou of functions; upon individual difference; upon the passage from

generalised to specific response, and on the lapse from specific to general; upon the nature of the stimuli which inhibit the reflexes; upon the afferent-efferent character of the cortical centres, and the formation within them of reflex complexes. It enables us to compare the cortical effects of disparate stimuli, and exhibits the mechanism of voluntary action, voluntary attention, cognition, self-consciousness. It frees psychiatry of subjectivism; and in combination with the results of psychophysical experiments holds out the promise of a system of psychoreflexology.] Literaturbericht.

"Scientia." Rivista di Scienza. Vol. xii., No. 6, November, 1912. **W. H. White.** 'The Place of Mathematics in Engineering Practice.' [This lecture was given by Sir W. H. White at the Congress of Mathematicians at Cambridge in August, 1912, but this fact is not stated. "The true place of mathematics in engineering practice is now better understood, and it is recognised to be an important place, although not so important as was formerly claimed for it by mathematicians." Good work was done by mathematicians of the eighteenth century, such as Daniel Bernoulli, in laying the foundations of naval architecture; and the author contrasts the later methods of William Froude with those of Bernoulli, and this gives an indirect answer to the problem suggested in the title. It is now admitted that the mathematical part of an engineer's training is best given in the regular manner by a mathematician. Many problems, such as that of the design of ship's propellers, need a mathematician's help.] **G. Ciamician.** 'La fotochimica dell, avvenire.' [In view of the probable future exhaustion of the coal-supply of the world,the author discusses the question whether fossil solar energy is the only kind which can be made use of in modern civilisation. The author believes that it is possible artificially to increase the vegetable production of substances which can be used as sources of energy. Further, the reply to the question as to whether there are other means of production which can rival the photochemical processes of vegetation is to be found in the future of industrial photochemistry, which has hitherto been solely occupied with photography. The article ends with a short sketch of the future order of things, made with some enthusiasm.] **O. Hertwig.** 'Disharmonische Idioplasmaverbindungen und ihre Folgen.' [A biological paper.] **M. Meillet.** 'L'évolution des formes grammaticales.' [The two processes by which grammatical forms are built up are analogical innovation and attribution of a grammatical character to a word which was formerly autonomous. The second process has been much less studied during the last forty years.] **A. D. Xénopol.** 'L'idée de loi scientifique et l'histoire.' [Attempt to determine the meaning which the term 'scientific law' ought to have, without troubling about the various meanings which can be attached to the term 'law'. Conclusions: (1) The scientific law is the general formula which reproduces in the mind the indefinite repetition of material or intellectual phenomena; (2) The development of the forms of all existence is not ruled by laws, but rather by series which express general ideas of succession; (3) The sciences are intellectual disciplines which cannot be conceived without a net-work of general notions, and these notions are, in the sciences of out repetition, laws, and, in those of succession, series.] **W. Ostwald.** 'Ueber Organisation und Organisatoren.' [Application of the general theory given in the preceding number of *Scientia* to modern problems, such as the organisation of chemical research.] Critical note. **G. Matisse.** 'La pensée répond-elle à une mise en jeu d'énergie?' [On Armand Gauthier's ('Sur l'état de vie,' *Revue Scientifique*, April, 1912) criticism of the doctrines of J. Loeb.] Book Reviews. General Reviews: **P. Burgatti.** 'Les hypothèses cosmogoniques jugées par M. Poincaré.' **C. Acqua.** 'Des phénomènes de la respiration dite inorganique.' Review of Reviews. Chronicle.

IX.—NOTES.

MIND ASSOCIATION.

There will be a joint session of the MIND Association, the Aristotelian Society and the British Psychological Society, on 7th and 8th June, 1913.

The following arrangements have been made—

Saturday, 7th June, at University College, Gower Street :—

3.30.—The Annual Business Meeting of the MIND Association. President.—Prof. G. Dawes Hicks.

4.0.—Tea.

4.30.—Meeting arranged by the British Psychological Society.—Chairman.—Prof. C. Spearman. Symposium: "Are Intensity Differences of Sensation Quantitative?" Messrs. C. S. Myers, Dawes Hicks, H. J. Watt and Wm. Brown. The papers will be published by the *British Journal of Psychology* and will be taken as read.

7.0.—Dinner in the Refectory.—Price 5s. not including wine. Morning dress. Members and their guests.

9.0.—Meeting arranged by the Aristotelian Society. Chairman.—Hon. Bertrand Russell, President. Paper by Dr. Arthur Robinson on "Memory".

Sunday, 8th June, at Crosby Hall, Cheyne Walk, Chelsea Embankment.

1.0—Lunch. Tickets 2s. 6d. Members and guests.

2.30.—Meeting arranged by the Aristotelian Society. Chairman.—Hon. Bertrand Russell, President. Symposium: "Can there be anything obscure or implicit in a Mental State?" Messrs. Henry Barker, G. F. Stout and R. F. A. Hoernlé. The Papers will be published in the *Proceedings of the Aristotelian Society* and will be taken as read.

4.30.—Tea.

The following gentlemen have joined the MIND Association since the printing of the January number of MIND :—

Rev. M. Maher, St. Mary's Hall, Stonyhurst, Blackburn.

Prof. A Mair, Liverpool University.

P. E. B. Jourdain, The Lodge, Girton, Cambridge.

NOTE ON ACHILLES AND THE TORTOISE.

It is perhaps bold to return once more to this venerable controversy after the treatment of it in Mr. Russell's *Principles of Mathemetics*. But it seems worth while on two grounds. In the first place Mr. Russell's arguments, though undoubtedly correct in themselves, do not seem quite to meet the exact difficulty which many intelligent persons feel. And secondly it is important even at this time of day to settle the controversy finally, because it and Zeno's other paradoxes have become the happy hunting-ground of Bergsonians and like contemners of the human intellect.

Mr. Russell's solution is that the supporters of the Achilles are trying to prove that the course of the tortoise can never be a proper part of that of Achilles because the construction shows that each has the same number of points. And he says that their fallacy lies in forgetting that in an infinite class a proper part can have the same number of terms as the whole. But I do not think that they really make the argument turn on considerations of whole and part, but simply on the question that at no point given by the construction has Achilles reached the tortoise.

The argument that I want to put forward may be divided into two parts. The first thing to notice is that it is perfectly true that at no point given by the construction are Achilles and the Tortoise together at the same moment. But the points given by the construction are obviously not *all* the points in the common straight line, but only a small selection of them. Hence the conclusion that they *never* meet or meet at *no* point (which is what is actually asserted) cannot be justified by the explicit premises alone. As far as anything that is made explicit is concerned there is nothing to show that the two do not meet at one of the infinitely numerous points on the line which are not given by the construction. Hence there must be some implicit premise involved. And this brings me to the second part of my argument.

The supporter of the Achilles must evidently hold that if the two do not meet at a point given by the construction they cannot meet at any point on the line. Why should he hold this? I think it is easy to see his reasons and to see that they are fallacious. He can prove that if they meet at any point it must be beyond every point given by the construction. He can also prove that the number of points given by the construction is infinite. And now he assumes the plausible proposition 'what is beyond every one of an infinite series of points must be infinitely beyond the first point of the series'. If this were true his conclusion would follow, for it would take the two an infinite time to reach the only point at which they could possibly meet. But the proposition is utterly false. This can best be illustrated by considering a series of numbers instead of one of points, and the relation of 'greater than' instead of that of 'beyond'. Consider the series whose general term is $2 - \frac{1}{n+1}$ where n can have any integral value including 0. It is clear that its first term is 1. It is further clear that it has an infinite number of terms. Finally 2 is greater than every term of the series. Hence if we had an analogous proposition to that assumed by the supporters of the Achilles we should have to say: '2 is infinitely greater than 1, for it is greater than every term of an infinite series whose first term is 1'. The obvious absurdity of this shows the absurdity of the implicit premises without which the Achilles cannot draw its conclusion.

C. D. Broad.

"MAURICE THE PHILOSOPHER."

In his note on "Ethics and the New Intuitionists" in the January number of Mind Mr. Harold P. Cooke asks me to explain some difficulties he finds in my review (Mind, No. 83) of his book *Maurice the Philosopher*.

It is not exactly 'arguments from' but rather 'explanations of' the nature and purpose of definition that I think might have helped to remove some of Leonard's confusions. Such explanations are by no means always required in discussing a question, whether ethical, psychological, or otherwise. The need for them arises only where—as in the dialogue

referred to—one of the parties shows some lack of this kind of logical knowledge and falls into confusion in consequence. What I tried to express was that if Lancelot and Maurice had had a clearer view of the nature of definition their treatment of Leonard would have been shorter and more effective, even if less like the rambling discussions that occur in real life. 'Meeting a man on his own ground' always means granting him certain assumptions, and it is quite usual to find as a discussion proceeds that we have begun by granting too much, and so have wasted time. In this case Leonard is allowed to assume (p. 49 in the Dialogue) that "a definition is a statement of the parts that together go to make up a thing"—an assumption which, by the way, permits him to speak of 'defining' an individual,—as if an individual could have an essence.

This confusion between definition and description (or between explanation of the meaning of the word 'X' and statement of facts about the thing X) is common enough, and if nothing further depended on it the objection to it would be verbal and pedantic. But here it seems to me partly responsible for Leonard's further assumption of the mutual independence of word and notion. As things to be described they are different; as something to be defined they are the same, since it is only in the form of a word that a notion can enter into an assertion, and so be ambiguous and need defining.

Mr. Cooke asks me to 'show the import of definition in Ethics'. I should say that its function there is exactly the same as everywhere else—namely the removal of ambiguity discovered in assertions. I do not see how an assertor can escape from the need of removing ambiguity from his assertion by calling it "nothing else than a piece of psychology". A mental state is, no doubt, independent of words; but not so a contention about it. If Leonard were to tell me that he had an experience which words altogether failed him to describe, I should be none the wiser; if however he did try to express the experience in words, I might find some difficulty of interpretation, might see ambiguities unseen by him, and might want those ambiguities removed. Failing their removal I should still be none the wiser.

Can we describe anything except in terms of something else? Description (or predication) is always the assertion of an analogy between S and other members of the class P; and since it is always possible to be misled by a false analogy, the question whether the analogy is sound (which involves defining the name or notion—*i.e.* stating the essence of the class—P) is always relevant. Do we escape this difficulty by calling S unique and therefore indescribable? I cannot follow the suggestion (p. 85) that to call the notion S "entirely distinct from any and all other notions" can *assist* us to find out anything about the nature of S. It seems to me to have the opposite effect. Though every individual thing, S, *is* unique, to call it so is to say that S is S; which to the inquiring mind is a mocking answer. We must run a risk of error if we are to give, or get, information. Thus any description of a concrete fact falls short of ideally perfect truth; and the old superstitious discontent with truth that is not ideally perfect leads (I would submit) to the dead as contrasted with the living and fruitful kind of scepticism. If a so-called truth (*i.e.*, an assumption) will work, and while it works, what more can we require of it? The interest of progressive knowledge lies in finding the breaking-point of the value of existing assumptions, not in stopping at the recognition that they are 'somehow' not ideally perfect. Rather let us begin with that admission, as justifying our search for definite errors.

ALFRED SIDGWICK.

New Series. No. 87.] [July, 1913.

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

I.—THE LAST PHASE OF PROFESSOR WARD'S PHILOSOPHY.

By J. H. Muirhead.

To the student of English Philosophy in the last quarter of a century the most interesting point is not the general adoption of the idealistic point of view, but the division among idealists themselves between old and new. The origin of the schism, though dating to the eighties, is probably fresh in the memory of most readers. By enveloping all finite forms of being in a timeless and, therefore, processless Absolute, the older idealism seemed to have become untrue to itself and to the spirit of the age. While politicians and reformers were filled with enthusiastic belief in progress, philosophers seemed to be occupied in reducing it to an illusion by representing all effort as a mere meaningless "reproduction" in time of what was already eternally present. Just when people were beginning to realise that all real progress must begin and end in an enhanced value of the individual person, personality was being made to appear to be a contradictory, and, therefore, unreal aspect of an impersonal experience which belonged to nobody and was of nothing. With the evacuation of human life of all intelligible meaning went the impoverishment of the divine. A God who was the god of puppets could only be a puppet god.

The keynote of the revolt was struck in A. Seth's *Hegelianism and Personality* in 1887. Sixteen years later it was taken up in W. James's *Will to Believe*. But the writer who has done most both in the field of psychology and in the theory of knowledge to provide the movement with an alternative metaphysic is undoubtedly Professor Ward. It is the

germ of such a metaphysic which gives its chief philosophical interest to the Article on "Psychology" in the *Encyclopædia Britannica*. It is the development of these germs more than the long-drawn-out controversy with Spencer which gives significance to *Naturalism* and *Agnosticism* now standing as the link between the 'Article' and his recent work on the *Realm of Ends*. How deeply this book had affected the younger generation was seen on the appearance of *Personal Idealism* in 1902, the aim of which was to make obvious the general nature of the task that had to be accomplished in demonstrating the possibility of constructing a spiritual philosophy on the idea of the ultimateness of purposful activity and of personality, without the aid of the idea of an Absolute or other underlying principle of unity. In spite of the great ability of the contributors the book did little to advance the cause they had at heart, partly because the real issue was imperfectly apprehended, partly because the writers, in spite of nominal agreement, started from different premises and were at cross-purposes with one another in their conclusions. Prof. Ward is under no misapprehension as to the problem that has to be faced or the basis that must serve for its solution if anything of value is to be established against the older idealism. The starting-point must be a world of self-determining monads united merely by their co-existence, and forming apparently without other bond of unity a *totum objectivum;* the problem is to explain on this basis the actual constitution of the world as a Realm of Ends. More definitely, assuming the reality of history as established in *Naturalism and Agnosticism*, the question is, can we explain the actual course of historical development towards ever greater union and co-operation on the one hand, ever greater individuality of the parts on the other? Can we justify the hope of the continuance of this development and the ultimate triumph of the good? It is this to which he sets himself in what I have ventured to call the last phase of his philosophy as so far expounded.

As the argument is somewhat obscured by the method he adopts, I shall try to summarise it for purposes of reference, at the same time extricating it from what to some will be the main value of the book, the subtle and suggestive discussion of historical doctrines by which it is illustrated.

We are to start with what is merely given at the lower limit—an unstable plurality of individuals all seemingly acting at random. Were these the lifeless atoms of the physicist, it would be inconceivable how any unity could supervene. But on the assumption that they are endowed with spontaneity, we have, from the beginning, a principle of determinate adaptation in the necessity under which each is to conserve

and realise itself. The very fact of coexistence in a medium which they themselves supply, as a kind of precipitate analogous to the habits of individuals, constitutes, from the outset, the basis of a totality—and dispenses with the necessity of 'providing externally for correspondences by a pre-established harmony. In such a world, everything will be "inchoate but not chaotic," for it is a world of struggle in which the fittest and most typical survive and establish their ways partly by force, partly by prestige. It is on the foundation thus established that future progress is built: this is the *natura naturata* on which the *natura naturans* of the living generation works. What the shape of the building shall be is unpredictable. As we look back, we can trace a certain continuity; as we look forward, all is contingency. Progress is by a series of happy accidents, not by deliberate design. The only uniformity is the need—the materials show nothing but diversity. The stellar universe of movement, without apparent centre, is no inapt symbol of the world of relative order within a general drift of contingency, that we are to picture. It might appear that to secure coherence there must be some prior *identity* of interest. But this is not so. All that is necessary is that the monads should have *like* interests, above all that they should have a like interest in the mutual adjustment of claims called justice. This is not Hobbism, for Hobbes brings in universality and necessity "from without". Here there is no without: the objective is implied from the first in the subjective, others in the self. Social development is not bringing two separates together, but a differentiation of the *totum* into self and others which is at the same time a pervasion of the one by the other—issuing in a new reality of a higher or over-individual order. Nor is it Hegelianism. For Hegel seeks by means of the idea of potentiality to make the actual historical result into a logical ground, and thus to read the end into the beginning. For pluralism "reality is entirely actuality; the potential belongs exclusively to abstract thought,"[1] providing no motive, and therefore useless, at the beginning, conducting us to a unity which is at best that of a community, not a personality, and therefore fatal at the end. Yet some unity there must be if we are to suppose development continuous. This may be supplied by the existence of spirits to whom unlike many the whole evolution can be an object, and who have some directing power over it. The actuality of such higher intelligence is the great question of Theism. It is rendered probable not only by the evidences of a higher principle in evolution interposing at certain stages, as, for instance, at the creation of man's moral qualities or to secure other than merely utilitarian features (*e.g.*, æsthetic valuation), but also by the emergence, at the stage of human society, of an over-individual unity. The one limitation on which pluralism must insist is that the higher intelligence shall be a supreme, not an absolute; a *primus inter pares*, not an *ens entium*. Only so can we make room for "a living God with a living world, and not the potter God with a world of illusory clay" which is all that either Absolutism or philosophic theism admits of. Even so we must beware of using this principle as a ground of explanation. It is a practical postulate, a constructive principle of action, but of no use in speculative philosophy.[2] We know only in part; when the part shall be done away with—we have no idea what the world shall be. From the same premises follow the probability of a future life, "the one fundamental argument for which is not the need of adequate compensations—but for adequate opportunities; not the demand for fairer wages but for fuller work".[3]

[1] P. 108. [2] P. 442. [3] P. 409.

It is perhaps a thankless task to examine the foundations of a philosophy which seems to ask so little and to promise so much, and which has already received so enthusiastic a welcome in MIND. My apology must be that in philosophy we are concerned not primarily with the value of conclusions, but of the arguments by which they are reached, and that were I in closer agreement with Personal Idealism than I am, I should hold it equally important to examine the basis on which so much depended, to see in particular that the gift did not turn out to be a Trojan horse. What I believe a maturer consideration must show is that just in so far as Prof. Ward remains faithful to his pluralistic assumptions of the *apparatus creativus* that he sets up does he fail to make good his promises, and on the other hand, so far as he makes good his promises he does so by appealing to a principle which he owes to the philosophy he seeks to undermine and which is quite incompatible with his own.

It will be seen from the above analysis that the problem falls into two, roughly corresponding to the two parts of the book. How are we to conceive of the process of history in its beginnings? What guarantee have we of its continuance and completion?

(1) We pass here over the question of the uniform environment which has to be evolved from the contingent behaviour of the primary monads in the manner described but hardly explained in *Naturalism and Agnosticism*. This problem though implied is not directly raised in the *Realm of Ends*. Our attention is directed to the corresponding question of an objective social order which, like that of nature, claims the allegiance of the members. Starting with a plurality of individuals impelled by a blind impulse of self-preservation (*i.e.*, by an end which is primarily private to themselves[1]), feeling pleasure and pain according as they find themselves in harmony or discord with their environment we have to explain 'progress' as above defined. This problem has been present with Prof. Ward from the beginning. He raises it in the Article, and answers it in a well-known passage[2] which is quoted both in *Naturalism and Agnosticism*,[3] and in the *Realm of Ends*,[4] so that it comes to us with the authority of three separate endorsements. Yet I venture to think that few students will fail to recall the misgiving with which they first read it. Why should a creature which has reached the measure of adaptation that enables it to fill its skin at regular intervals in the manner

[1] P. 87. [2] P. 72.
[3] Vol. I., p. 298 (2nd ed.) [4] P. 79.

there described, and thus to survive, endanger its equilibrium by seeking to change its condition at all? Prof. Ward himself feels the difficulty in *Naturalism and Agnosticism* and explains it by an appeal to the principle of satiety. But this only raises new difficulties. How does satiety come to operate at all in a being of various needs and with various modes and occasions of satisfying them? It is the perception of this difficulty that leads the writer in the same passage to equate satiety with the indifference of habit. But this only postpones the difficulty. Why should indifference displease? Only on the assumption that pleasure or excitement is the end of endeavour. But apart from hedonistic implications there is here the further difficulty that displeasure in an action which has ceased to be pleasant may account for change, it will not account for progress—it will account for a shifting of the scene, not for a development of its contents. This difficulty also presses on the writer, and in the *Realm of Ends* he is fain to supplement the principle of self-conservation with an impulse to "betterment" without apparently being conscious of the *petitio principii*. Why should the monads seek betterment, *i.e.*, the development of higher needs, instead of the more frictionless supply of their existing needs? Only on one condition that their nature as potentially something in idea which is only partially and inadequately realised in actuality drives them to seek a form of existence more adequate to their true nature. But to admit this would be to bring in just the conception of ideality or implicitness which Prof. Ward, as we have seen, is pledged to exclude. But this is not all. In the *Realm of Ends* the problem has become specific. What has to be accounted for is not the development of a new kind of existence continuous with the old, but one that replaces the old ends of self-preservation and a more pleasure-giving form of existence by devotion to common ends involving their subordination. It is to meet this that Prof. Ward emphasises, as against Hobbes, the fact of the mutual implication of self and others in a *totum objectivum* from the first. But a *totum*, if it means anything, is a totality, and it is just this idea of an enclosing unity that it is impossible to harmonise with the assumption of the ultimateness of the plurality. To constitute a totality there must be some inward relation —some unity or identity of content which, however held in the background at the outset, is the spring of the expansive, assimilative process which it is agreed constitutes progress. The difficulty is only evaded by the distinction which Prof. Ward makes between the *like* and the *identical*. Nothing but

identity will here serve. To have like desires in a limited universe, as in Kant's celebrated example, is to set up not unity but opposition. What is required is that the unity should itself be an object of desire, and this involves the idea of a common or identical good. Equally verbal is the reply to the accusation of Hobbism. Prof. Ward claims that upon his theory of the origin of the objective there is no "without": all is in relation to the subject from the first. But this is just what the reader wishes to understand. Does it mean that, from the first, the monads are pledged by their nature to a form of life from which all discrepancy is eliminated and difference transformed into distinctiveness of function in an organic whole? In that case, we have again just the principle of an underlying unity that goes deeper than differences. If it means anything *less*, we are left with ultimately incompatible elements which relatively to each other are a mere without.

That the first is his real meaning seems proved by the course his thought takes at the end of this section when he faces the question of the direction and goal of progress and is fain to borrow the answer from T. H. Green and Prof. Bosanquet, finding its principle, on the one hand, in the recognition of the claims of a common humanity, on the other, in "the fundamental logic of human nature". Unless we are to take this *transitio in aliud genus* as pure inadvertence, it can only mean that Prof. Ward has exchanged his pluralistic starting-point for that of the philosophy he sets out to oppose. Green's conclusion is only possible on the assumption that the starting-point is not a "state of natural selfishness" but a state in which the interest in a common good, (as that is bound up with the nature of a being who has the possibility of self-consciousness), is obscured by the struggle with a natural environment. Prof. Bosanquet's appeal is still more directly to that in man which drives him to a form of life more consistent with his idea with the same kind of insistence as that with which the premises drive the intelligence to the conclusion implied in them.

(2) As might be expected where the question is directly of the guarantee of continuous progress, the movement of thought from an outward to an inward principle is still more conspicuous. At the outset, the writer finds himself embarrassed by the necessity of reasserting the pluralistic starting-point and of seeking for the guarantee in something external to the monads themselves. Instead, therefore, of developing the principle he had reached at the end of the

first part, he sets out on an intricate argument to prove the possibility of the existence of intelligences, perhaps a single intelligence, standing to the world in some closer though apparently no essentially different relation from the subordinate monads. With regard to this argument, I can only repeat what I have already said as to the one by which he tries to render conceivable the starting-point of progress. It is doubtful whether even the most sympathetic reader can have carried away from it anything but a sense of disquiet. In so far as it rests on the supposed necessity of introducing an external agency at certain points in organic evolution in order to account for æsthetic values in nature and moral qualities in man it seems to involve the express repudiation of the principle of continuity which is appealed to in support of it. So far, on the other hand, as it rests on the appearance in society of a unity of a higher over-individual order, it seems to be an express admission of the inadequacy of the account of the evolution of society already offered in the first part of the book. We are as ready as Prof. Ward to acknowledge the principle of epigenesis and to contend that evolution means the appearance of forms of being incapable of being resolved into a mere union of the parts we reach by analysing them. But unless we are to rest content with a frank appeal to miracle, we cannot take this to mean that these higher unities are discontinuous with the parts and unconditioned by them. It can only mean that the category of condition and conditioned is inadequate to meet the situation: that nothing short of a logical or a teleological relation will suffice. It is to this that Prof. Ward himself again comes when he faces the real issue: what guarantee have we of the ultimate supremacy of the Good over the evil? Using the argument that has been the common property of Idealism from the time of Plato, he there tries to show that Good is by its very nature self-consistent, carrying its own victory with it, evil is self-contradictory and carries its own defeat in itself. As the passage is crucial, I may be excused for quoting it:—

"We are wont to say that a struggle between good and evil is now constantly going on, and then our question takes the form: which side, so far as we can judge, bids fair to win? But in fact the question in this form is not truly put. There is no such dualism of good and evil, they are not two co-ordinate powers, in a word there is no *principle* of evil. There is a moral order, but evil is only disorder. This is the grain of truth in the contention so persistently maintained that evil is essentially negative. However woefully men mistake what is their real good, it is this none the less that each one constantly strives for: evil as evil is no man's aim. The devil's aim it is indeed said to be, but we are none of

us pledged to believe in the devil. The struggle with evil then is not a struggle for supremacy like the battle of the gods and the Titans; it is an advance against hindrances which exist only as hindrances, not as beings having ends of their own as Manichæism supposed. The moment the true character of any form of evil is apparent, that moment the struggle to overcome it begins. When, then, we compare the unity and solidarity of the good with the motley many-headed shapes of evil ever at cross-purposes with each other, the conservation common to all forms of good and no forms of evil, when, too, we consider *the close connexion between the good and the true on the one hand, between error and evil on the other*, have we not ground for believing in the eventual triumph of the good, have we not ground for maintaining that such moral evil as we find in the world, terrible though it is, is after all not such as to justify the atheistic position."[1]

I have ventured to underline the passage which emphasises the unity of principle of the good and the true. The writer explains in the sentences omitted how all are committed to the good by the nature of desire and will by the same sort of logic as they are committed to the true. The question that forces itself upon the reader is again why, if this is the real guarantee of progress, it should not have been made the principle of the exposition from the beginning. Again the only reply is that to have admitted it to the central place would have been to concede that going deeper than the differences in individuals there is a principle at work which requires the transformation of the apparent original plurality into an essential interdependence—their quasi-individuality into a real one, and this would have meant a reconstruction of the whole philosophy.

Such a reconstruction I believe to be necessary. The question of what alteration in the assumptions which underlie Personal Idealism would be entailed lies outside the scope of this paper. What I believe has been demonstrated by this courageous attempt to bring Personal Idealism to the test of a single issue is the impossibility of explaining the real world that History reveals on the basis of a conception of the individual which rests on taking activity, conation, self-initiated process for an ultimate as this philosophy seeks to do. What obscures this to the writer is, as we have seen, the fear of an Absolutism which, by representing human life as a mere reproduction of an eternally real leaves no room for freedom and personality. But whatever ground for alarm may have have been given by incautious phrases, it ought by this time to be clear that this cannot have been the meaning of the idealist writers who may have used them. On a theory founded on the denial of the reality of time, whatever else it is, the relation of the Absolute to the finite cannot be

[1] P. 376.

that of an "already" to a "not yet" experienced. If it be urged that it is just this alleged unreality of time that is the gist of the objection, the reply again is that what is denied is not the reality of time but the possibility of setting time up as itself an Absolute and of making the value of the soul's life to consist in its realising something that is new instead of something that is more adequate to its nature, and therefore more able to satisfy—a not-yet instead of an eternal. What the relation of such a fulfilment to personality as we know it is, is, indeed, a great question. But there are two ways of going about the answer. We may fix ourselves in the notion of personality as consisting essentially in that which is independent of external determination, *or* we may conceive of it as the condition of determination by the truth and of realising forms of experience, in which it finds its freedom in a higher form of dependence. I believe that the latter is the true meaning of personality, and I have tried to show that this is already implied in moral consciousness.

Had the question been of the justification of religious consciousness, this would, I believe, have been still more obvious. It is no part of my object to try to prove this here. But I venture, in conclusion, to offer as a test of the validity of the opposing conception a passage taken from a writer which will probably be admitted to represent some of the deepest religious experience of the race.

> Scripture [writes St. Bernard] says that God made all things for His own sake. This will come to pass when the creation is in full accord with its Author. Therefore we must sometimes pass into that state wherein we do not wish to be ourselves or anything else except for His Sake and by reason of His will not ours. Then not our need or happiness but His Will will be fulfilled in us. As a drop of water is diffused in a jar of wine taking its taste and colour and as molten iron becomes like to fire and casts off its form, and as the air transfused with sunlight is transformed into that same lightness of light so that it seems not illumined but itself the light, thus in the saints every human affection must in ineffable mode be liquefied of itself and transfused into the will of God. How could God be all if in man anything of man remained. A certain substance will remain, but in another form, another glory, another power.

This is not philosophy but a highly imaginative devotional assurance. It may also be all wrong. But if, as I believe, it is a veritable phase of human consciousness, it clearly points to a different metaphysic from that of a philosophy which seeks to found a theory of all experience on determination by self-given ends as the ultimate fact of the universe.

To have raised uneffective protest against modern Parmenideanism whether naturalistic or idealistic in the interest of self-hood and process is a good thing, and this we owe in great part to Prof. Ward. But if the position is going to be held, it can only be by showing that both the self and the movement in which it finds its life take their value from something which, whatever else it is, is not a movement or a process of time.

II.—RECENT CRITICISM OF KANT'S THEORY OF KNOWLEDGE.

By G. Dawes Hicks.

Kant's Theory of Knowledge. By H. A. Prichard, Fellow of Trinity College, Oxford. Oxford: Clarendon Press, 1909. Pp. vi, 324.

Lectures on the Philosophy of Kant, and Other Philosophical Lectures and Essays. By the late Henry Sidgwick, Knightbridge Professor of Moral Philosophy in the University of Cambridge. London: Macmillan & Co., 1905. Pp. x, 475.

Perhaps it may be attributable to the greatness of Kant that, whilst most of us have our own quarrel with the transcendental theory, we are seldom satisfied with the criticisms of others, and feel inclined, as against the latter, to enlist in the service of Kant's defence. Unfortunately English works on the Kantian philosophy have most of them been written from a more or less antagonistic point of view. The one marked exception is furnished by the several expositions of Adamson. Not that Adamson would ever have called his own position Kantian. But he possessed a remarkable facility of placing himself within the circle of ideas of a philosophical system and of inspecting that system from the inside. In respect to few thinkers is this so necessary as in respect to Kant. By a combination of circumstances, the fundamental lines of Kant's reflexion tend to be lost from sight, and even the most conscientious of interpreters is constantly running the danger of not seeing the wood for the trees.

The two books named above[1] have each of them a strongly marked polemical character. Both are written from the point of view of a realism framed to a large extent on the model furnished by "the philosophy of common-sense". Both

[1] The writer of the present review deeply regrets the delay, for which he alone is responsible, in the appearance of a notice of these books in the pages of Mind.

agree in maintaining, as against Kant, what he would have called the "transcendental reality" of space, time and material entities. Both agree in finding the Kantian theory of knowledge to issue in subjective idealism. Prof. Sidgwick's Lectures are throughout interesting and on many points suggestive. But one has the feeling that his want of sympathy with his author prevents him from coming into contact with the deeper side of the Kantian speculation: he seems to be perpetually skirmishing round the outworks, and to bring up his heaviest artillery to overthrow them. Mr. Prichard confines himself entirely to the *Æsthetic* and the *Analytic*, and scarcely refers to the later portions of the *Kritik* even for the purpose of elucidating the earlier. These he submits to a running fire of attack, with the object of showing Kant to be wrong upon nearly every problem with which he dealt. I do not think, therefore, that either writer does anything like justice to the many-sidedness of Kant's work or to the real significance of his philosophy. At the same time, Sidgwick's Lectures were well worth preserving, and, under Dr. James Ward's careful editorship, they have a distinct value as indicating more clearly Sidgwick's attitude towards certain metaphysical questions than is indicated in his other books. And in like manner Mr. Prichard's volume presents in an acute and a lucid manner the main outlines of a view of knowledge which has recently been finding favour in Oxford, and which one is glad to have worked out so skilfully in print. I confine myself here, however, to the representation that is offered in each volume of Kantian doctrine, and must be content to refer to some of the more fundamental points alone.

Kant himself, as Mr. Prichard rightly remarks (p. 30), rarely ventures to touch the problem necessarily raised by his initial supposition as to the way in which experience is given to us. He has little or nothing to say with respect to what precisely is to be understood by such a phrase as "operation on the mind". There clings undoubtedly to his mode of exposition the conception of the mind as being mechanically affected by a real agent, of the results of such affection being the empirical elements of experience, and of the marks of universality and necessity as furnishing a sufficiently distinct criterion of that which in the complex content of knowledge is due to the mind itself. And doubtless it is this conception of a mechanical relation between real stimuli and the mind which lies at the root of the subjective character which Kant was inclined to assign to knowledge as a whole. The material constituents of knowledge, the

specific or particular elements of the apprehended content are, he seems to say, supplied from without, and this circumstance gives rise to a permanent obstacle between the mind and the assumed outer sources of its material filling. Accordingly, knowledge inevitably comes to be looked upon as a *construction* on the part of the mind itself and as lying within the limits of the mind or subject. This tendency may be said to furnish the chief count of Mr. Prichard's indictment of the Kantian theory. "Knowledge," he insists, "is essentially discovery, or the finding of what already is. If a reality could only be or come to be in virtue of some activity or process on the part of the mind, that activity or process would not be 'knowing,' but 'making' or 'creating,' and to make and to know must in the end be admitted to be mutually exclusive" (p. 118). Knowing in virtue of its very nature presupposes that the thing known is already made, or, to speak more accurately, already exists. "Even if the reality known happens to be something which we make, *e.g.* a house, the knowing it is distinct from the making it, and, so far from being identical with the making, presupposes that the reality in question is already made. Music and poetry are, no doubt, realities which in some sense are 'made' or 'composed,' but the apprehension of them is distinct from and presupposes the process by which they are composed" (pp. 235-236).

The point thus pressed seems to me unquestionably important, and to be also, in respect to certain trends of reflexion pursued by Kant, relevant. But I should urge that Mr. Prichard lays the blame for the confusion he condemns upon the wrong things, and that he himself, in the revision which he proposes of Kantian doctrine, falls into the very error which he deprecates.

It is, I understand, the view of knowledge as essentially synthesis which, in Mr. Prichard's judgment, is responsible for the confusion just referred to. "The process of synthesis by which the manifold is said to become related to an object is," he insists, "a process not of knowledge but of construction in the literal sense, and it leaves knowledge of the thing constructed still to be effected" (p. 238). Everything, however, depends upon the way in which the Kantian notion of synthesis is interpreted. In the somewhat laboured account he gives of the process of synthesis, Kant wishes, I take it, to guard against two possible misunderstandings. He wishes to guard against what one may perhaps call a mechanical view of synthesis on the one hand, and a merely psychological view of it on the other. The synthesis he has in mind is not, he indicates, merely a coming together of

parts, but a unity in which the parts are contained as parts. The various elements of the manifold are not to be considered to be themselves distinct objects each having, so to speak, an existence of its own,—objects which, when put together, constitute no more than an aggregate. Pure synthesis, taken in its generality is, as he puts it, equivalent to the pure notion of the understanding. Equally pronounced is his rejection of a merely psychological interpretation. If there be synthesis, the reduction to unity of multiplicity, there must certainly be involved, so one may represent him as arguing, a process of imagination,—the act of perceiving, that is to say, must be an act in which the content apprehended does really go beyond what is momentarily furnished in intuition. But this association, this psychological conjunction of parts, although no doubt involved in synthesis, is not itself synthesis, or the unity implied in knowledge. And Kant takes considerable pains to show that imagination can only work in so far as the supplement which it makes to the directly given elements of sense is determined according to the principles of the unity of consciousness. The psychical mechanism required for effecting the synthesis is one thing, the synthesis itself is quite another; and Kant's argument loses all its force if it be supposed that by any composition of parts not in themselves involving the unity of knowledge there can accrue to the whole which is assumed to result that unity which is the characteristic mark of knowledge. In asserting that the function of the understanding is "to bring the synthesis to notions," what Kant is really saying is that synthesis or combination *is* itself the very act of knowing, that notions *are* the ways in which a conscious subject is aware of unity in the act of combining a manifold. Mr. Prichard, however, takes Kant to mean by synthesis something very different. "When Kant speaks," he writes, "of synthesis, the kind of synthesis of which he is usually thinking is that of spatial elements into a spatial whole; and, although he refers to other kinds, *e.g.* of units into numbers, and of events into a temporal series, nevertheless it is the thought of spatial synthesis which guides his view. Now we must in the end admit that the spatial synthesis of which he is thinking is really the *construction* or *making* of spatial objects in the literal sense. It would be rightly illustrated by making figures out of matches or spelicans, or by drawing a circle with compasses, or by building a house out of bricks" (p. 233). This interpretation is not supported by any definite references, and I am at a loss to understand on what grounds it can be based. A synthesis which consists

in determining the contents of sense intuition in accordance with the conditions of the unity of self-consciousness seems to be oddly described as a synthesis of "spatial elements into a spatial whole". Nothing that I can find in the "Deduction" justifies that description. On the other hand, it is true that in the "Deduction" of the first edition there is a lapsing into a psychological mode of treatment. Sensibility, with its synopsis, imagination, with its schemata, understanding, with its categories or pure forms,—these are there dealt with as though they composed the psychical mechanism with which each human mind was provided. Yet Kant has himself supplied, more expressly no doubt in the "Deduction" of the second edition, but also in that of the first, abundance of material for correcting any misapprehension to which the mode of treatment in question might, if it stood alone, give rise. And, after all, as a piece of psychological analysis, this particular portion of Kant's work has its value. What is said, for example, about imagination as "eine blinde, obgleich unentbehrliche, Function der Seele," refers to a very real factor in the development of the individual consciousness, which Lotze also had occasion to emphasise in his own way in his discussion of the logical judgment.

Quoting the opening passage of the *Analytic*, Mr. Prichard pronounces, curiously enough, the Kantian way of distinguishing between sensibility and understanding to be "straightforward and, on the whole, sound" (p. 28). I believe, on the contrary, that, under the influence of his opposition to Leibniz, Kant was here committing himself to the fatal step which led him into the pitfall of which Mr. Prichard makes so much. Even on purely psychological grounds it is impossible to retain the hard and fast distinction between sensibility and understanding in any fashion that will be helpful for explaining the development of cognition, and when regarded as absolute, as a difference of kind, it is a distinction flagrantly at variance with Kant's own view of the nature of understanding. The consideration which, however, I would press in the present connexion is the following. To separate the shares contributed to knowledge by sense and understanding respectively, whether the contributions be looked upon as due to the operation of these so-called powers or in whatsoever other way they may be accounted for, is inevitably to give rise to the conception that what is contributed is a product, a real fact or occurrence, and that the resulting combination is in some way a compound in which these two detached elements come together. Moreover, to describe thought as an instrument, as that whereby the material of experience is

worked up into the form of knowledge, implies at once that the resultant, the content known, occupies the position of a *tertium quid* between the cognising mind and the world of reality. Now this is, as I have said, the reiterated complaint Mr. Prichard has to bring against the Kantian doctrine. Kant, he maintains, in virtue of his theory of perception, "interposes a *tertium quid* between the reality perceived and the percipient, in the shape of an 'appearance'" (p. 137). "In stating the fact of perception he substitutes for the assertion that things appear so and so the assertion that things produce appearances in us" (p. 73), and, at the same time, is unaware of the transition, or, at any rate, fails to distinguish the two expressions (p. 74). As against certain tendencies of Kant's thinking, the complaint is, I conceive, quite just. But that these tendencies are to be traced to the source I have indicated is confirmed by the strange fact that Mr. Prichard is himself landed in a predicament similar to that which he so lucidly exhibits in the Kantian writings. After the strenuous way in which it is insisted that knowledge of an existing reality presupposes that the reality known exists independently of the knowledge of it (p. 118), and that we are not entitled to treat the knowledge of a fact as though it were itself the fact to be known (p. 126), one is perplexed to find a rigid distinction instituted between primary and secondary qualities, and a refusal to recognise the latter as real qualities of things (pp. 85-88). After being told that "it is really an abuse of the term 'appearance' to speak of appearances *produced by* things, for this phrase implies a false severance of the appearance from the things which appear" (p. 86), one is baffled by the discovery that after all things do "produce certain sensations in us," and that the secondary qualities, in contrast to the primary, are relative to perception and do presuppose a percipient. Mr. Prichard, it is true, disputes the propriety of calling "sounds, smells, tastes and sensations of touch" appearances, although, I confess, I have failed to understand his reason for doing so. But, appearances or not, they are certainly apprehended contents, and as such constitute no inconsiderable part of the world of experience. He admits, however, that colour does "seem to be a real quality of bodies," despite the fact, as he takes it to be, that it is not (p. 87). According to his own argument, the *white colour* of the sheet of paper before me, since it is dependent upon the mind and would disappear with the disappearance of the mind, is a reality of the kind called mental (p. 121). How, then, one is surely constrained to ask, can it be maintained that there is no *tertium quid* in the form

of a 'representation' between me, the percipient, and the sheet of paper I perceive (p. 133)? Sensuous elements are, *ex hypothesi*, involved in all apprehension of bodies (p. 91, note); they enter, that is to say, into the structure of every object as perceived. How, then, can they fail to intervene between the percipient and the real object, and prevent the latter from being apprehended as it is in itself?

I turn to another consideration. What, let me ask, is the main principle the establishment of which is the aim of Kant's "Deduction of the Categories"? Expressed quite generally, it might, I take it, be said to be this. Whatsoever we venture to lay down as constituting part of the world of experience must be capable of being construed in terms of mind or intelligence. Kant, it is true, tends constantly to interpret this theorem as though it signified that the experience of the finite subject consisted of *Vorstellungen*, or (as we will say for the moment) states of mind. And on the supposition that such is veritably his meaning, there is no difficulty in showing that the critical theory is landed in a hopeless position before the problem of knowledge. "It seems to him," says Sidgwick, "absurd that the 'thing-in-itself' should wander into my consciousness; yet, so far as I can see, neither he nor his English expositors find any difficulty in conceiving the phenomenal thing to wander out of it. Both he and they seem to hold that I can know objects to be merely modifications of my sensibility, combined in certain ways by my understanding; while at the same time I also conceive them as different from the modifications of my sensibility and as perduring when the latter cease" (p. 73). And similarly Mr Prichard lays stress upon the inconsistency which culminates in the very same *Vorstellungen* being spoken of as "having both a subjective and an objective relation, *i.e.* as being both modifications of the mind and parts of nature" (p. 233), and, in an earlier chapter contends that "an 'appearance,' being necessarily something mental, cannot possibly be said to be extended" (p. 76). I have no desire to minimise the glaring contradictions that here come to the surface. If *Vorstellungen* be treated as on the one hand the matter known and as on the other hand states or modifications of the empirical self, there is no escaping the crudest form of subjective idealism. And I do not deny that in language at least Kant often does come dangerously near to that *impasse*. But the main trend of thought in the *Analytic* supplies ample warrant for hesitation in supposing this to be Kant's actual meaning. When, for example, it is laid down that all so-called facts of experience must be

interpreted in accordance with the forms of apperception, and that apperception, or the transcendental unity of self-consciousness, must be distinguished from the empirical existence of the finite subject, the latter being included among the facts of experience, the inference surely is irresistible that if phenomena are *Vorstellungen*, they are not *Vorstellungen* in the sense of being processes of mind, parts of the complex whole we designate the finite mind. One cannot, of course, definitely prove that Kant was not blind to so very obvious a consideration, but the supposition that he was is, to say the least, highly improbable. It becomes simply incredible when we follow his treatment of certain specific problems in the course of the *Analytic*. What are we then to make, for instance, of the elaborate argumentation in the discussion of the second Analogy on which is rested the distinction between objective sequence, sequence in the object, and the merely contingent way in which we may put together what is offered in intuition? Mr. Prichard, as might be expected, can see in all this nothing but a mass of confusion. Kant, he thinks, "is committed to a philosophical vocabulary which makes it meaningless to speak of relations of objects at all in distinction from relations of apprehensions" (p. 282). But I venture to urge that, considering the extraordinary diversity of usage that has marked the history of such a term as *Vorstellung*, a drastic judgment of this sort is altogether arbitrary. Kant need not always have intended by *Vorstellung* a *psychischer Vorgang;* he might very well have also employed the term, as Berkeley employed the term "idea," to signify the content known, and, unless we are going to credit him with the most palpable nonsense, we are bound frequently to understand him as using the expression in this sense. To take but one illustration. When in working out the import of the second Analogy Kant sharply distinguishes between *Vorstellung* and its given object or *Erscheinung*, and then immediately adds that after all the latter is nothing but a whole of *Vorstellungen*, is it not manifest that he is here availing himself of the ambiguous significance of the word? And if so much be allowed, Kant was by no means compelled to subscribe to the assertion, which apparently Mr. Prichard holds to be self-evident (p. 121), that the dependence of a reality upon mind, or its being in its own nature "of such a kind as to disappear with the disappearance of the mind" is equivalent to its being "of the kind called mental".

Kant, it is true, was surprisingly ready to rest satisfied that he had disposed of the idealistic argument by pointing to the

ultimate and irreducible difference, as he believed it to be, of outer and inner sense. Since the space-qualified contents of outer sense were no less directly and immediately apprehended than the non-spatial contents of inner sense, since both were equally parts of experience, the transition from inner to outer, which had been impugned from the side of idealism as a merely problematical inference, required in truth not to be made at all. The reality of outer experience was just as certain and unquestionable as that of inner experience. But it ought to have been obvious from the beginning that neither Berkeley's idealism nor any other can be refuted by emphasising a characteristic like space-extendedness which is possessed by the contents of dreams and illusions as unmistakably as it is possessed by the contents of actual sense-perception. In more than one place, however—in the preface to the second edition of the *Kritik*, for example—Kant recognises that the question to be faced concerns the relation in which the contents of external perception stand to real existing things in space. His contention then is that from the mere flow of presentations, it would be impossible for me to determine my own existence in time, and that even the circumstance that space-extendedness characterises certain contents of those presentations would not supply the additional factor needed for such determination. The consciousness either of my own or of any existence in time implies in its very nature, as going beyond the presented contents, that which is distinct from the presented contents, and it cannot be accounted for by any characteristic or quality of the presented contents themselves. It involves, so it is maintained, the *existence* of permanent outer things as distinct from the *Vorstellungen* of outer things. "I am just as certainly conscious of the existence of things external to me, which are related to my sensibility, as I am conscious that I myself exist, as determined in time." For the rest, Kant seems to say, the existence of such external things can in no way be represented in terms other than those of experience; and, from the *Metaphysische Anfangsgründe der Naturwissenschaft*, which appeared the year before the second edition of the *Kritik*, it becomes tolerably clear that the external existent thing, as here conceived, is by him identified with the movable in space which affects our organs of sense. The reference, in other words, is not to an unknown thing-in-itself, which, as unknown, would not serve as the condition for the consciousness of our own existence in time, but to empirical things in space.

Sidgwick is very decidedly of opinion that by "objects" Kant must not be taken to mean "things in themselves".

"'Object' in the sense in which it is used in the *Analytic*—especially if used in connexion with 'objective'—is always 'object of possible experience'" (p. 69). I confess I should not have thought that this admitted of doubt. But Mr. Prichard will not have it so. According to his view, up to the passage in the *Analytic* of the first edition dealing with "the Synthesis of Recognition in Conception," Kant's doctrine was that the object corresponding to and producing unity in our *Vorstellungen* is the thing-in-itself, then, at this stage, a second object, viz. the phenomenal object, is introduced, and henceforward it is this phenomenal object which is prominent in the first edition and has exclusive attention in the second (pp. 183-185). Such a mode of exegesis creates far more and greater difficulties than it solves. That Kant should suddenly introduce into the first edition a momentous change of the kind indicated, a change which would imply a complete transformation of his entire theory, and have left the passages where the old view was in evidence untouched, that he should have deliberately re-written the sections of the "Deduction" for the second edition, and yet have allowed preceding sections, in which the discarded doctrine is to be met with, to remain as they were,—all this is so extremely improbable that one requires the most convincing proof before accepting it as fact. So far as I can discover, Mr. Prichard offers no proof at all; he proceeds simply to interpret the text along these lines. And naturally he is led to convict Kant of gross inconsistencies (*e.g.* of speaking of elements being related to an object as though it were a known object when in truth it is the unknowable thing-in-itself),—inconsistencies which were the term "object" taken to mean what admittedly it does mean a few pages further on and subsequently could not be laid to his charge. How any one can read through the earlier parts of the *Kritik*, and, in face of reiterated assertions to the effect that "alle Gegenstände blosse Erscheinungen sind," still be satisfied that when Kant is speaking of "objects" he does not mean "phenomenal objects," passes my comprehension.

In contending that, according to Kant, the thing-in-itself is the correlate to the unity of consciousness (p. 183), Mr. Prichard can claim the support of many expositors. Undoubtedly the term "transcendental object" is often used as a synonym for "thing-in-itself" or "noumenon". But it is not always so. Not to mention the strongly emphasised position that the notion of noumenon is not the notion of an object, Kant expressly asserts in one place at least that the altogether indeterminate thought of something in general

cannot be called noumenon. And in the passages of the first "Deduction" where mention is made of the "transcendental object," he does not, I think, intend that phrase to denote "thing-in-itself". It is with the *notion* of the transcendental object that he is there concerned. And he is contemplating that notion, it seems to me, as in the first instance, a factor in the fundamental act of knowing,—the act, namely, whereby there comes forward in the life of consciousness the unique antithesis between subject knowing and object known, the former not as yet being regarded as the concrete individual, the antithesis being merely the form of knowledge in general. No doubt later on the notion of the transcendental object is regarded by Kant as *a* factor, or *the* factor, in knowledge on which may be rested the reference he thinks is involved in the phenomenal world of experience to a reality other than the phenomenal. But that is very far from identifying the notion in question with the notion of a noumenal reality. So much so, that Kant expressly repudiates the idea that the transcendental object can in any way be abstracted from the sense data in conjunction with which it is apprehended, for on the removal of these nothing, he says, would remain whereby it could be conceived. The transcendental object, he adds, is only the presentation of phenomena (*die Vorstellung der Erscheinungen*) under the notion of an object in general, which can be determined, or definitely known, through the manifold of these phenomena. I do not see, therefore, that Kant is, in this connexion, departing from his central position that recognition of anything as an object is only another mode of describing recognition of the definite law or rule according to which the manifold of sense is combined, or that by "object" ought to be meant that element in the perceived content which constitutes the necessary and universal aspect as opposed to the merely empirical details of sense intuition.

The most disappointing chapter in Mr. Prichard's book appears to me to be that in which he treats of the Kantian doctrine of space. Kant, he contends, in dealing with space as a form of perception frequently speaks of this form of perception as though it were the same thing as the actual perception of empty space (p. 37). In consequence, the assertion that space is a form of phenomena is confused with the assertion that space is a form of perception (p. 39). And thus the conclusion comes to be drawn that our apprehension of space is *a priori*, because we apprehend empty space *before* we become aware of the spatial relations of individual objects in it (p. 42). To some extent, this way of interpreting

Kant's position coincides with that offered by Sidgwick. Sidgwick, indeed, admits, apparently, that *a priori* ought to be understood as logical, and not as chronological, priority, but he insists that this proviso is "irrelevant to the question whether space really belongs to the object perceived, independently; or is only a form under which the human mind is by its constitution compelled to perceive it" (pp. 41-42). That may well be; but it certainly is relevant to the question whether the perception of empty space precedes the perception of actual objects. None of the passages to which Mr. Prichard appeals seem to me to justify the allegation that Kant falls away from the confessedly critical meaning of the term *a priori*. He maintains no doubt that the *a priori* form of space is precedent to the perception of objects,—precedent to the perception of them as related to one another in space. But that does not involve that space, as an idea or percept, is present to the mind previous to sense apprehension, or that it possesses what may be called innateness of nature. Nothing can be more explicit than Kant's repeated declarations that our knowledge of space is acquired, and is not innate. He speaks, it is true, of space as a "pure perception," but, having regard to his own definition of "pure," that does not mean that space is originally an object of perception, but rather that the space element of what is perceived has nothing in it of an empirical character. He neither says nor implies that space *merely as a form* can be perceived.[1] On the contrary, he emphatically asserts that "space and time never can be perceived by themselves"; whilst, in a familiar footnote (of the second edition of the *Kritik*), he explains that space, when presented as an object, contains more than the mere form of intuition, combination, namely, of the manifold,—a combination dependent upon the synthetic activity of the understanding,—and that he had not meant in the *Æsthetic* to say anything in violation of this view. Space, as a form, is, in other words, merely a *condition of the possibility* of perception; it renders the synthesis of perception possible, whilst the work of the understanding is needed to render such synthesis real. Quite legitimately, of course, the question may be raised whether space by itself can be *conceived* at all. Kant believed it could be; but then it was what he termed a "notional entity," an object of thought, not an object of perception. Mr. Prichard further argues that Kant was wrong in distinguishing the way in which we apprehend

[1] Kant, of course, ought not to have spoken of the forms of perception as perceptions any more than he ought to have spoken of the categories as notions. But, after all, the resources of language are limited.

the nature of space as a whole from the way in which we apprehended the general characteristics of objects. "Thus, in the case of colour, we can distinguish colour in general and the individual colours of individual objects; or, to take a less ambiguous instance, we can distinguish a particular shade of redness and its individual instances" (p. 44). I have urged already that the generic distinction which Kant instituted between perception and conception was a mistake. If, as cannot be doubted, even the simplest axioms relating to space and its relations are of the nature of judgments, we certainly cannot explain such axioms by referring them to a source conceived as opposed to and devoid of the essential nature of judgment. But, on the other hand, Kant was surely right in pointing out the important difference between space as actually experienced and the contents of notions which are obtained by the exercise of the *discursive* processes of thinking. The relation of the one space to individual spaces he was surely right in regarding as a relation very different from that of colour in general to an individual colour, even though Mr. Prichard's dictum be conceded that to assert there is only one space "simply means that all individual bodies in space are related spatially" (p. 47). Whatsoever our theory of the precise nature of space, of this I should have thought we might be perfectly satisfied,—that as a fact of experience it is not a concept derived by generalisation from particular objects.

I have been compelled to leave untouched those portions of the two books under consideration where lines of thought are followed with which I am more or less in agreement. In Mr. Prichard's chapter on "The Schematism of the Categories," for example, there seems to me to be contained much admirable criticism, and I should say the same of that on "Time and Inner Sense". With his main contention, too, as to the relation between appearance and reality I am in accord. Only I think the latter commits him logically to a far more radical revision of the Kantian theory than he apparently would sanction. The idea of experience as the result of the action of the real upon the consciousness,—an idea which Kant in various ways struggles to avoid, but from which his theory cannot be wholly freed,—strikes, I should be prepared to maintain, at the root of all intelligible explanation of knowledge. For it means that a quasi-existent mode of being is assigned to the phenomenal world, no less puzzling than the mode of existence assigned by Plato to sense particulars. Knowing is a subjective process, unquestionably; but this, in itself, in no way condemns it to play for ever with entities of its own fabrication.

III.—THE PESSIMISM OF CREATIVE EVOLUTION.

By J. W. Scott.

The impression made by Bergson's *Creative Evolution* is not really a matter for surprise. Apart altogether from his style, his message itself is one which could hardly fail to fascinate in the present state of culture. *Creative Evolution* is virtually an examination of the power of natural science to give an ultimate account of things. The best background, therefore, to the view of reality which it suggests, is the view of natural science; or, more accurately, the view which an intelligent thinker would naturally draw from the facts which natural science reveals. And between the two views the difference is striking. The "scientific" position—to confine ourselves here to a bare outline of what is only vaguely present to the average educated mind—is pessimistic. The stuff of the universe is matter. Its life is energy. All that we call movement is due to this energy. Nay, all change—the entire restlessness of things—*is* nothing else than the ceaseless down-rushing of energy out of its reserves; its escape out of a state in which it is pent up at certain points, into a state in which it will be spread out evenly all over matter and be still—like water which has reached its own level. Human civilisation is simply a small part of this universal movement. To speak metaphorically, it is placed on this stream, and driven by it, like an under-shot mill wheel. Now, the stream is certainly very vast, but it is getting lower. And long before it has exhausted itself it will have gone low enough to leave the wheel high and dry. To put it more concretely: the energy on which we are dependent comes from the sun. Of that energy there is only available for our industries so much as has been caught in antediluvian forests and stored in coal. We are therefore working on our capital. And we should still be working on our capital even if we could somehow tap a new source of energy, and thus—to return to our metaphor—lower the wheel, and "place civilisation upon the broad flowing river of energy" once again. We might thus put off the day of reckoning,—perhaps put it very far off;

but we should not change it. If, for instance, we learnt to use the tides we might, so to speak, immensely lengthen our lease of life; but the end would still be the same. What else could it ultimately mean, except simply that we were utilising the brake upon the earth—the brake which is slowing down its rotatory motion, and thus, gradually but inevitably, bringing us nearer the day when its tides will rise no more. The same is ultimately true of whatever new source of energy is awaiting our ingenuity to release. We can still only release it. However vast the stores on which we draw, we can never put a foot-pound of it back again, once it has flown out. The conclusion seems inexorably simple. The universe is running down like a clock. It may take long enough to do it. But that is what is going on.

Particular scientific thinkers may have various ways of softening this result. But this is the result which the average man, looking straight at the scientific story, will be apt to say that it comes to. Hence the inherent interest of the question which Bergson raises, Is science competent to yield a philosophy at all? Does it, *qud* science, ever truly see the reality with which it seeks to deal? Bergson answers this question in the negative. And if, coming straight to the point, you ask what it is, exactly, that science misses; the answer is, the real character of movement. Reality is a continual process of change; and the change is, what science never grasps, a "becoming". If we ask further why science misses it, we shall find the reason in this—that the nature of "becoming" is incompatible with the instrument which science uses in order to deal with it, namely, the intellect. Get behind the artificial picture which intellect makes, get into contact with movement itself, directly, intuitively. You will find that movement is evolution; moreover evolution is in no sense a running down; it is real progress; that is to say, it is a process in which more is for ever coming to be than was before.

The thesis of *Creative Evolution*, then, is that Reality is *not* exhausting itself. Its very essence is to be a perpetual building of itself up into a richer and more varied assemblage of states and conditions. The title of the book, therefore, might have been "Reality as Self-creative," or simply, "Being Becoming". As such, it stands in fascinating contrast to the sombre view which we have cited, and which in one form or another has acted like a prepared background in the mind of the enlightened culture which awaited Bergson's work.

There is an objection to his general view, suggested by Bergson himself in the fourth chapter of *Creative Evolution*,

an objection which he acknowledges to be serious, and one with which he must grapple closely. It is his treatment of this objection that chiefly concerns us in this paper. We wish to examine his answer to it; because in his answer he seems to expose an aspect of his theory which is pessimistic.

The objection itself can be stated, without essential misrepresentation, in an almost crudely simple way. It is said that new being is for ever coming to be. Where does it come from? How or whence does the universe get its new stuff? For it is claimed that what comes to be *is* new. It was not there before. To say that it existed "potentially" would be to endorse one of the errors of the intellect—the theory known as Finalism. In the process of evolution, there is no stage at which you could say, of the matter there to hand, that it contained an anticipation or an outline plan of the end towards which the whole was advancing. Nature does not aim at ends. It only "takes directions". It is not "a plan in course of realisation". It is more and better than that. It creates. It brings forth what absolutely was not before. Which means that something comes forth from nothing. Being arises and "suppresses" nothing. Which looks like sheer, crude miracle.

Bergson's reply is virtually an admission of the paradox. It is even by such miracle that the universe is actually and perpetually sustained. His defence of this consists in a criticism of the opposite position, *viz.*, that perpetual creation is absurd. He tries to bring into light the assumption which underlies this position. Of course, this is not his only defence. He does turn attention to other possible points of view in the earlier chapters of the book. But this negative line of defence, as will be shown later, is the fundamental one.

The objector, then, cannot understand how that can come to be which genuinely never had being. "First nothing and then something," he says, is impossible. It *is* impossible, replies Bergson in effect, if we are to believe that "nothing" either is or ever was. But this is not true. "Nothing" is but a pseudo-idea, a mere fabrication of the intellect, which we should not allow to hinder our accepting any hypothesis which is otherwise credible and necessary.

It is true that in ordinary life we are apt to assume the reality of negation or "nothing". Indeed, the philosophic impulse springs very often from little else. When the speculative mind first looks round itself "in wonder and in fear" to ask itself that unanswerable question, "Who am I? What is this *me?*" the notion of "nothing" has a great deal to do with it. We feel *its* right to existence. The sense of

the question is: "Why should I be, rather than nothing? Why should the universe, why should anything at all be, rather than simply nothing?" We assume that "nothingness" might have been, and that it would not have needed explanation. But our habit of assuming the reality of "nothing" comes out most clearly when we are dealing with the affairs of practical life. There the reality of want is always assumed, and that is a way of treating "nothing" as real. "It is unquestionable . . . that every human action has its starting-point in a feeling of dissatisfaction and therefore of absence. . . . Our life is spent in filling voids which our intellect conceives under the influence of desire and regret; and if we mean by void an absence of utility and not an absence of things, we may say, in this quite relative sense, that we are constantly going from the void to the full; such is the direction which our action takes. Our speculation cannot help doing the same; and, naturally, it passes from the relative sense to the absolute sense, since it is exercised on things themselves, and not on the utility they have for us. Thus is implanted in us the idea that reality fills a void, and that Nothing, conceived as an absence of everything, pre-exists before all things, in right if not in fact."[1]

But this speculative "nothing" is a pure illusion. When we speak of the "nothing" which might have been, had the real not been, we utter a form of words, but we do not think at all. What could such "nothing" be? or how could it be apprehended? Try as we will we cannot image "nothing". "I am going to close my eyes, stop my ears, extinguish one by one the sensations that come to me from the outer world. Now it is done; all my perceptions vanish, the material universe sinks into silence and the night. I subsist, however. . . . I am still there . . . and with the impression, most vivid and full, of the void I have made about me." And to be conscious of this is by no means to be conscious of nothing. Even if I try to annihilate every element of consciousness and think the self which was conscious, as dead,—still, it is *I* who think all this. "Be it external or internal, some object there always is that my imagination is representing."[2] And no more, try as we will, can we *conceive* nothing. Such a conception were as absurd as a square circle. When I annihilate an external thing, in thought, when I think it as "being no more," I am not thinking an absolute void. I am thinking another sort of thing. In short, "a being unendowed with memory or prevision would not use the words

[1] *Creative Evolution*, pp. 313-314. [2] *Ibid.*, pp. 293-294.

'void' or 'nought'; he would express only what is and what is perceived; now what is and is perceived is the *presence* of one thing or another, never the *absence* of anything. There is absence only for a being capable of remembering and expecting. He remembered an object and perhaps expected to encounter it again; he finds another, and he expresses the disappointment of his expectation . . . by saying that he no longer finds anything, that he encounters 'nothing'. . . . What he perceives in reality, what he will succeed in effectively thinking of, is the presence of the old object in a new place, or that of a new object in the old place; the rest, all that is expressed negatively by such words as 'nought' or the 'void' is not so much thought as feeling, or, to speak more exactly, it is the tinge that feeling gives to thought. The idea of annihilation . . . is therefore formed here in the course of the substitution of one thing for another, wherever this substitution is thought of by a mind that would prefer to keep the old thing in place of the new." With the attempt to think of an internal state as annihilated it is the same. In a word "*the representation of the void is always a representation which is full, and which resolves itself, on analysis, into two positive elements: the idea, distinct or confused, of a substitution, and the feeling, experienced or imagined, of a desire or a regret*".[1]

What is called negation, so far as it is thought at all, is affirmation—only, it is affirmation *about* something else than the object named in the proposition. When we say of a thing that it "is not," we think we are judging the thing. But we are mistaken. When I say "this table is black," I am affirming something of the table; but when I say "It it not white," I am not making a negative affirmation about *it*. If I perceive at all, I do not perceive an absent white, but a present black. But the chances are that I do not perceive at all. So far as this judgment is concerned, I am really turned away from the table. I am making a *positive* affirmation about something *else* which I apprehend, or might apprehend, namely, the judgment which should say "this table is white". I am positively affirming that judgment to be false. Which means that I am judging some person's possible judgment on the object. I am dealing not with things, but with my fellow-men and their attitudes to things. I am aiding or warning or correcting them, because I am interested in them. "Thus, whenever I deny, I perform two very definite acts: (1) I interest myself in what one of my fellow-men affirms, or in what he was going to say . . .

[1] *Creative Evolution*, p. 297. Italics the author's.

(2) I announce that some other affirmation, whose content I do not specify, will have to be substituted for the one I find before me. Now, in neither of these two acts is there anything but affirmation."[1] Denial, therefore, does not express reality. It has, from first to last, a practical, "sociological and pedagogical" character. I deny, because I am interested, not in things themselves, but in judgments upon them, and in persons making such judgments. "Suppress every intention of this kind, give knowledge back its exclusively scientific or philosophical character, suppose, in other words, that reality comes to inscribe itself on a mind that cares only for things and is not interested in persons: we shall affirm that such and such a thing is, we shall never affirm that a thing is not." "Suppose language fallen into disuse, society dissolved, every intellectual initiative, every faculty of self-reflection and self-judgment atrophied in man . . . the passive intelligence, mechanically keeping step with experience, neither anticipating nor following the course of the real, would have no wish to deny. It could not receive the imprint of a negation. For, here again, that which exists may come to be recorded, but the non-existence of the non-existing cannot. . . . To sum up, for a mind which should follow purely and simply the thread of experience, there would be no void, no nought, even relative or partial, no possible negation. Such a mind would see facts succeed facts, states succeed states, things succeed things. . . . It would live in the actual, and, if it were capable of judging, it would never affirm anything but the existence of the present."[2]

What, then, could be more absurd than to allow an imaginary "Nothing" to defeat the ends of a process of creative evolution? If "Nothing" were to be replaced by being only through a miracle, then, as we said, it is a miracle that is being performed every day. Only being ever is. "Nothing" needs no suppressing; because it is already perpetually and effectively suppressed.

II.

We may anticipate here the main point of this paper, so far as to say, that it is in this re-appearance of the Eleatic "non-being is not" in the midst of a Heracleitean gospel of change, that we find the pessimistic heart of that gospel. For, to put it bluntly, the "nothing" which is here ignored, is the stock-

[1] *Creative Evolution*, p. 305. [2] *Ibid.*, pp. 307-310.

in-trade of intelligence; and of all our mental faculties so far as they are intelligent. Let us consider for a moment the character of intelligence and Bergson's representation of it.

The intellect, on Bergson's view, is an instrument of practice; and it is in the service of practical ends that it acquires its habit—speculatively fatal—of substantiating "nothing". How is this taint contracted? To make use of one of Bergson's own examples, think of the intellectual process involved in the very simple practical task of raising the arm. This movement involves innumerable contractions and adaptations of nerve and muscle. We do not deliberately set ourselves to perform all these adaptations in due order. If we did we could never get along. The mind ignores them—glides over them, so to speak, and fixes its attention on the peg or the shelf we wish to reach. What the mind thinks of, when it performs a practical movement, is the end—the point where action will be over and movement give place to rest. This is the habit of the practical consciousness everywhere. When it "intends" anything, what it prefigures is always the point of rest, the projected scheme as filled in and completed. It never really grasps the movement. Even when it prefigures the progress of the action, it only apprehends the motionless plan which the movement is to follow. It does not grasp movement as such. In living its life, therefore, the practical intelligence goes through a series of leaps. It goes from an end to a further end, from static scheme to static scheme; and holding firmly on to each of these in turn, lets the movement come, which is to fulfil it. It never so to speak gets inside the movement itself, and moves with it.

Now, one cannot write in water. The practical consciousness must draw the static diagrams of its action, but it could not draw them upon the background of a purely flowing reality. For practical purposes, therefore, the world must be made to present a static appearance. Yet, really, it is not static. When we perceive the outside world, we find colour succeed colour, sound succeed sound, resistance succeed resistance. Nor do we take each colour, each sound, to be anything else than a state which persists. "Yet each of these qualities resolves itself into an enormous number of elementary movements. . . . In the smallest discernible fraction of a second, in the almost instantaneous perception of a sensible quality, there may be trillions of oscillations which repeat themselves." The real, then, is vibrating to the very core. It is the re-

verse of stable. And yet intelligence and perception succeed in giving to this flux the stability which practice requires. They do it by gathering a plurality of these moments into one; a larger or smaller number as the case may be. The vibrations thus "condensed" appear in perception as qualities. And, in all likelihood, this power of condensing a series of changes into an instant is not exclusively human. It only surpasses in its range an essentially similar power possessed by all the lower forms of life, each in its own degree. The essential point is that this function is always the handmaid of action. "The greater the power of action bestowed upon an animal species the more numerous, probably, are the elementary changes which its faculty of perceiving concentrates into one of its instants. And the progress must be continuous, from the beings that vibrate almost in unison with the oscillations of the ether, up to those which embrace trillions of these oscillations in the shortest of their simple perceptions. The first feel hardly anything but movements; the others perceive quality. The first are almost caught up in the running gear of things; the others react, and their faculty of acting is probably proportional to the concentration of their faculty of perceiving. The progress goes on, even in humanity itself. A man is so much the more a 'man of action' as he can embrace in a glance a greater number of events: he who perceives successive events one by one will allow himself to be led by them; he who grasps them as a whole will dominate them."[1]

Intellect, then, makes the world stable for practice by concentrating or condensing the moments of its movement. What *are* these concentrations or condensations? Roughly, they are cross-sections—or rather, sections taken at an angle—in the flow of reality. Now it is the relation of these to that of which they are the sections that is important if we wish to see the pessimism in Bergson's represensation of the mind of man. We contend that he really does the same thing with these cross-sections as he does with "nothing"—deprives them of anything but "pseudo" character, and therefore of all title to exist. And with that the intelligence-values of man's universe vanish away.

Laying aside all questions of practice, let us ask what these "cuts" are, for a true speculation; what they are in reality. Bergson speaks of the way in which intelligence regards them, as an error; an error "near akin" to the intellect's other error of taking "nothing" for a reality. The question is, are the two errors only "near akin"? Are they not

[1] *Creative Evolution*, pp. 317-318.

exactly the same error, and in need of the same correction? To call those "snapshot views" of the intellect "nothings," and straightway to drop them out of the universe, would certainly contradict what Bergson says about them on various occasions when he is summarising his views on the nature of intellect. He then accords to the cuts (as we have called them) a certain status. He regards them as having a place of some sort in the reality whose essence is movement. "We say there is *more* in a movement than the successive positions attributed [by the intellect] to the moving object, *more* in becoming than the forms passed through in turn, *more* in the evolution of form than the forms assumed one after another. Philosophy can therefore derive terms of the second kind from the first, but not the first from the second."[1] Plainly if we are to believe that there is more in movement *than* the positions attributed to the moving object, we must assume that the latter are there at least. But are they? To answer this question we must not depend on summary statements. We must go back to the analyses they rest on.

Reality is, for Bergson, movement, becoming, evolution. Let us look closely, then, at evolutionary change, where his analysis can perhaps be seen most clearly. We observe a growing thing—the form it has now. Later we see it in a new form. But we never see the movement between. We may, of course, detect the object assuming a form between its first shape and its full shape. We may be able to insert quite a number of these intermediate stages. But no one of these intermediate forms or shapes gives us the movement. Every one of them is still. What it represents is a cross-section, a snapshot view, of a movement which never halts. Any such view presents us with the movement artificially arrested. And however many of such "arrests" we take, or however rapidly we look at them one after the other, even if we unroll them with the rapidity of a cinematograph film, they are still not the movement. Now the mechanism of intellect and perception presents reality after this fashion. It "condenses" the continuous flow of the real into a series of halts which it perceives, one after another. It may be able to perceive these successive "forms" at coarser or at finer intervals. But however finely it detects differences, say, of position in a moving body or shades in a changing colour, it can only jump from one to the next, while the movement remains that over which it leaps—*that which fills the intervals*. "Let me, then, concentrate myself wholly on the transition, and between any two snapshots, endeavour to realise what

[1] *Creative Evolution*, pp. 333-334.

is going on. As I apply the same method [the intellectual method] I obtain the same results; a third view merely slips in between the two others. I may begin as often as I will, I may set views alongside views for ever, I shall obtain nothing else. The application of the cinematographical method, therefore, leads to a perpetual recommencement, during which the mind, never able to satisfy itself, and never finding where to rest, persuades itself, no doubt, that it imitates by its instability the very movement of the real. But though, by straining itself to the point of giddiness, it may end by giving itself the illusion of mobility, its operation has not advanced it a step, since it remains as far as ever from its goal." [1]

What is this cross-section, then, which is all that the intellect ever gets of reality at any moment? Not only is it not the stream of movement which is reality, it is no part thereof. No number of such sections make up the whole stream, or ever come any nearer to making it up. They are, therefore, nothing of it. The intellect, that is, seizes literally "nothing" of reality.

If we look now for a moment at another analysis by which Bergson has always appeared to set some store, we shall find this view confirmed. What is the upshot, from the same standpoint, of his famous criticism of the ancient Eleatics, the victims *par excellence* of the intellectual method? Zeno proved that an arrow during its flight never moved. How could it? In any one moment it could not be in anything but one spot. It could not be in two. In each one moment of its flight, then, it must be still. That is, it is always still. Hence in this moving thing, at any rate, the movement is illusory. And every kind of change could be proved illusory by the same argument. Where is Zeno's mistake? He should have seen, according to Bergson, that the movement must not be confused with its trajectory. The arrow makes a path. It leaves a trail behind it, so to speak, in the air. Zeno's mistake is that he confuses the *flight* with this imaginary *line*. The flight is movement. The line is quite still. Now, though intelligence can comprehend the line it cannot comprehend the movement. It vainly tries to apply to the movement thoughts only adapted to the line. It assumes that the arrow is in a series of positions along the line, one after another, and that these successive positions make up its flight. They do not. They only make up the line. All the positions are

[1] *Creative Evolution*, p. 324.

static—portions of space. You can no more construct the flight out of them than you can construct movement out of immobilities. But Bergson is not here content to say that the immobilities by themselves are not the movement. They, again, are no part thereof. He does not say only that the positions do not make up the flight—that the moving arrow *was not* its position in space, or that it never *was* a point in its course. The arrow, on his argument, was never *at* a point of its course. It was never *in* a position in space. Which can only mean that the movement is not bound up with any course, nor can it in any way have positions implicated in it. The arrow was *only* flying, never occupying positions at all. However explicitly, then, it may be asserted afterwards that the movement contains "more" than a number of adjacent positions, there is nothing in the analysis to show that it in any sense contains these. To the movement they are an irrelevance. In reconstructing it, you have no use for them. And seeing reality is movement, these "positions" are nothing to it. They drop out.[1]

What, then, are we to conclude from the explicit analyses which underlie Bergson's main position, except that those views which the intellect gets of reality advance it nothing at all, so far as its aim of reaching reality is concerned? The "snapshots" which it takes when it confronts reality are in exactly the same position as the "nothing" which it occasionally sees there too. They do not exist. We have to cease to reckon them, because we have to cease to reckon negation, as constituents of the real. Nor is intelligence alone in its bankruptcy. It drags much else along with it in its fall. So far as they are intelligent, perception, imagination, language and moral practice all perpetrate the same absurdity, of inserting negation into reality. If we are to combat this tendency we must fight against all of these; a thing which Bergson declares modern philosophy has failed to do, and the ancient philosophers never tried. "A true knowledge," he says, summing up his comparison of Ancient and Modern Thought, "would have called upon the mind to renounce its most cherished habits. It would have transported us within becoming by an effort of sympathy . . . The moments of time, which are only arrests of our attention, would no longer exist; it is the flow of time, the very flux of the real, that we should be trying to follow."

Now, there might be little to regret in all this, if the things we are called upon to reject were things of no value. But is this so? There are doubtless habits of our mind which we

[1] *Creative Evolution*, p. 325 ff.

might surrender with little sorrow. But is the habit of trying to co-ordinate our world, gather its scattered elements together, thrust them back from us and get above them, one of these? Is the habit of perception, or that of imagination, or that of friendly discourse? All these, on this view, hide the real. As regards language, its very verbs do not express any motion. Perception and imagination too figure to themselves as the real, the static, the empty gap in the real. And practice, to which they are all yoked, blinds us most of all. The "man of action"—great man, as we should prefer to call him—grasping all the events of his time in one view, does not see these events as they really are. He cannot, for he must stand outside them. He dare not be immersed in them, or he would be "led by them". In the interests of practice he refrains from sinking himself wholly in the stream of change, and thus fails to grasp reality as it is. To whatever degree he would reach the real, to that extent and degree he must cease to be a great man of action. No wonder that Bergson speaks so impressively of the wrench we must make if we wish to reach reality. It is possible that after making the Herculean effort to "install ourselves into duration straight away" there may be something to gain; but it is certain that there is something valuable to lose.

III.

We began by describing a typical pessimistic conclusion regarding the destiny of the world which we said might readily be drawn from the depositions of natural science. And we noted the contrast which Bergson's theory seemed to present to this. We have since found that Bergson's view has a pessimism of its own. Is there any relation, now, between the two kinds of pessimism? Is there not a difference to note between the two? So far we have said practically nothing about Bergson's specific theory of development. Is there not here in particular a great difference of the two views—a difference between Bergson's vision of the evolution of life and any view which would regard life as simply a roundabout way towards death, or should have no ultimate prospect for the universe except to become a silent waste of lifeless matter? And is this difference not in the direction of optimism?

Let us recapitulate our results. If the doctrine expressed in *Creative Evolution* is strictly taken, reality is a continuous undifferentiated movement. It is true that, under the gaze of human intelligence, the solid stream breaks, as one might

say, into innumerable wavelets, which give it much richness and beauty. But these breaks are not the flow. They are stops in it. They are not reality but an artificial distortion of reality. Now this pessimism is not altered—it is only expressed in another way—if, instead of saying about these differentiations that they are gaps which are not there, you say they are things which *are* there, but of which—so far as concerns movement—nothing can be made. Suppose you find it hard to say, in so many words, that the arrow during its course is never anywhere. Instead, then, of saying that it did not occupy successive positions at all, say that the positions were there and were occupied, somehow; the movement was a reality, and so were the intermediate points; but the one has nothing to do with the other, and each is to be set down, so far as the other is concerned, as an irrelevance and an inexplicability. Then, instead of regarding the movement as real and the line it traces as nothing but an empty halt, you may come upon a mode of expression which puts the difficulty in the only really philosophic way. You may prefer to say that there are two reals, with no relation to each other. This is the root of the malady. We may express it thus: the *ultimate* real—the world which both the "reals" are in—cannot accommodate its members. Reality is movement. But, it seems, it is also stopping. And movement has nothing to do with stopping. The real has sundered itself. It has dispersed itself into two channels and lost its way. That is the pessimism.

Now, if we resist the temptation to isolate statements, if we dwell only on the broad spirit of the teaching, we shall find it very hard to regard Bergson's evolution theory as anything else than a doctrine that the universe has lost its way, or else that it never had one. It is, in essence, a theory of the progressive segregation of all the different lines of evolutionary advance. At the beginning of the process it is the vast, original impulse of life; which, as it prolongs itself through the successive evolutionary periods divides and again divides, branching off sheaf-wise, into a continually increasing number of continually diverging channels. One of these lines has terminated, so far, in man. Another terminates in the ants and bees. Others in other forms of life; each line tending to divide itself again. These channels do retain some sort of unity with each other. But there is nothing in their courses of the nature of a plan. To entertain such an idea is one of the most fruitful sources of error. The notion of final cause is already admittedly bankrupt, in the narrow, "external," childish sense of the scholastics. But the notion of

an immanent end is really as much bankrupt as the other. There is no idea of an end implicit in the beginning, in the evolution process. In fact the great mistake of the Natural Philosophy of Aristotle and of all who have followed him lies, the author tells us—and he italicises the whole passage—"in seeing in vegetative, nutritive and rational life three successive degrees of one and the same tendency, whereas they are three divergent directions of an activity which split itself up as it grew". The unity which the diverging channels of evolving life possess comes only from the fact that in some of them—notably that which ends in man—there is a faint trace, still, of their common source. But their movement is directed away from their source. Thus "the harmony lies behind, not before". So far from there being a growing plan in the course of nature, there is less and less plan, more and more discord, as we trace the movement forward. "Life, in proportion to its progress, is scattered in manifestations which undoubtedly owe to their common origin the fact that they are complementary to each other in certain aspects, but which are none the less mutually incompatible and antagonistic. So the discord between species will go on increasing. . . . Evolution is not only a movement forward; in many cases we observe a marking time, and still more often a deviation or a turning back. . . . Thence results an increasing disorder. No doubt there is progress, if progress means a continual advance in the general direction determined by a first impulsion; but this progress is accomplished only on two or three great lines of evolution, on which forms ever more complex appear; between these lines run a crowd of minor paths in which, on the contrary, deviations, arrests, and set-backs are multiplied. The philosopher who begins by laying down as a principle that each detail is connected with some general plan of the whole, goes from one disappointment to another as soon as he begins to examine the facts." [1]

As regards the general position which they indicate, these quotations cannot be made clearer by comment, and we pass on to our contention. We are not concerned here with the facts of biological evolution. What we do say is, that if this ultimate scattering of the life of the world be the last word which there is to say about those facts, then the last word is a pessimistic one. It has all the pessimism of a theory which banishes a large portion of its human value from the realm of being. By far the most of what is realised in the total

[1] *Creative Evolution*, pp. 109-110.

experience of living beings is here placed beyond the reach of any single kind of living being. And there is no way whereby man can recover it, short of setting himself against the whole principle of things. Indeed, take the view in its stringency, and we must go much further in our indictment of it. It is not a modified but a total pessimism—one as complete as that of the materialistic view with which we started. In what consisted the pessimism of that view? It lay in the fact that no "end," in any human sense of the term, could be discerned as the destination of reality. Now the present view, if we take it in its stringency, is in exactly the same case. If the movement of life (which movement is the real) is scattering itself as it proceeds; if, in virtue of its principle, it is scattering itself ever further; then it is as true on this theory as on any other, that there is no "end". There is here no real justification for speaking of the stream of life as sufficiently one, to make towards an end. It was not one, even in its beginning. If its progressive sundering of itself into greater and greater discord was its obedience to its own inmost principle, then its nature never was a unity. We have, strictly speaking, no right to speak of "nature" in the singular number at all. And if there is no nature there can be no "end" for it.

Bergson is partly prevented from feeling the full logic of his evolution theory, because of the way he permits himself at odd moments to personify the very nature which he is depriving of a principle. Thus, contrasting the development of an individual's various mental faculties with the development of nature's various species, he says: "We choose [in the course of a life] without ceasing; without ceasing, also, we abandon many things. The road we began to pursue in time is strewn with the wrecks of all that we began to be, of all that we might have become. But nature, which has at command an incalculable number of lives, is in no way bound to make such sacrifices. She preserves the different tendencies that have bifurcated in their growth. She creates with them diverging series of species which will evolve separately."[1] Again, speaking of the question whether animal or vegetable life represents the more fundamental direction of the advancing stream, he all but permits himself to speak of the intentions of nature. He raises questions of the form: "Which of the two is likelier to be the one which we could imagine nature having made her main object?"[2] And to personify is, of course, to render the thing personified the

[1] *Creative Evolution*, p. 105.
[2] See *e.g.*, *Creative Evolution*, p. 122.

most intimate of all possible unities. It is this way of speaking—or rather, this fatally easy way of forgetting what he is in principle doing with nature—that gives Bergson's theory the appearance of superior human worth to a materialistic version of the universe, or even to an idealistic one. Hence his claim that such a theory as his is better—has a higher human interest—than one which would have made nature the realisation of a plan. "A plan," he says, "is a term assigned to labour; it closes the future whose form it indicates. Before the evolution of life, on the contrary, the portals of the future remain wide open. It is a creation that goes on for ever, in virtue of an initial movement. This movement constitutes the unity of the organised world—a prolific unity, of an infinite richness, superior to any that the intellect could dream of, for the intellect is only one of its aspects or products." But if there be no "outline plan" of the end of evolution in its present or its past, if there is less harmony as it goes on, and, more than all, if the increasing discord is not an accident but, as Bergson seeks to prove, "must be so," then the above language is not justified. Nature cannot be either "good" or "open" or "one" or "prolific" or "rich" or "superior," unless *it is something.* But, if the theory is true, even the "it" is a metaphor. There is no "nature". There are only a number of mutually antagonistic tendencies,—if we can still speak of tendencies when we have deprived them of an aim. Bergson's picture of a "sheaving" evolution ends logically in a desert of atoms —atoms of "life" if you will, but atoms—a desert as comfortless as any materialistic hypothesis could contemplate. The only possible escape from it would be for some privileged atom to turn against its own principle and, travelling back up its own course, entice its neighbours to turn along with it, and reabsorb them at the junctions of the stream. But that is only further postulation. That miracle itself then cries out for explanation.

The pessimism thus found in Bergson's work is something more than a mere flavour which a delicate intellectual palate may detect in certain of his more abstruse reasonings. It is the ultimate character of his system. The unreality of negation—and the pessimism is all in that doctrine—is something more than a harmless piece of scholasticism with which he rounds off his work. It is the inspiring spirit of all his manipulation of concrete biological data. The "nothing" which appears as a mere psychological curiosity which a man may amuse himself trying in vain to see or hear, is really the very chasm which yawns between the various divergent

lines of evolutionary progress, is, between the human race and all that it might have been. It is that which dissipates the value of the world, till no conversation of it or return of it into itself in man or any other being, is consistently thinkable. It is the ultimate grave of all existence.

It is probably superfluous to raise in conclusion the question what Bergson's theory needs, in order to be a real and not merely an apparent optimism. But is the broad answer to such a question difficult to see? Surely the simple requirement is that he believe in negation—recognise the power of the human spirit to sustain negation, and even its deep need for such. To man at his best, to man at the height of his faith, a very complicated plan is a plan. And, we would add, it takes no very simple one to be, to the religious soul, intolerably unworthy of God. But is there not a heroic element in the human mind, whose depth Bergson fails anywhere quite to measure.

IV.—THE PROBLEM OF FREEDOM AFTER ARISTOTLE.

By G. S. Brett.

The general conditions under which the Epicurean view of life was evolved are familiar to all. The period is usually regarded as lacking in constructive power, and against this view there is little to be said. At the same time some far-reaching changes were made in the doctrines that were being transmitted. The problem of conduct held the first place in men's minds: the classical doctrines were revived and adapted to suit this predominant interest, especially in respect of, (*a*) the relation between human and divine action, and (*b*) the right of the State over the individual. The purpose of this essay is to elucidate one point, namely the correct interpretation of the ideas about freedom which are found in the Epicurean school.

Epicurus, we are told, adopted in the main those theories of the universe which Democritus had made peculiarly his own. Democritus had no distinctively ethical doctrine. The problem of conduct as we find it in the post-Aristotelian period is not older than Plato. The return to Democritus, consequently, affords no direct help on these points; on the contrary it proves a hindrance. From the physics of Democritus nothing seems to follow except a doctrine of pure fatalism. The problem before a teacher who had used Democritus as a battering ram against theology was that of finding room for the idea of freedom: it was a question of writing a critique of the practical reason after committing oneself to a doctrine of natural causation.

The final position of Epicurus may be summed up thus:—

(1) Epicurus is opposed to Democritus; (2) his answer to Democritus is based on the idea of declination; (3) this declination is not one more form of determination; on the contrary it implies that the mind is capable of any motion up to the time when it actually moves; it is therefore undetermined; it moves only in accordance with the laws of force and is therefore free.

The paradoxical character of the last point is only apparent. Gassendi, in his explanation of it, explicitly states that Epicurus defended freedom on the ground that Fate and Nature, or natural causes, are the same thing. In other words, the fallacy of Epicurus' opponents consisted in so interpreting the idea of natural causation as to get back to the position of those who maintained fatalism. This explanation I believe to be correct. It involves, incidentally, the passage in which Lucretius speaks of the "fatis avolsa potestas". This I take to be a power saved from the fates (by Epicurus) to be restored to the region of natural law.

The natural and superficial way of refuting this interpretation is to quote the reputed saying of Epicurus to the effect that "it would have been better to follow the tales about gods than to be slaves to the fate of the physicists". A very little logic will be enough to show that this passage does not help us. Epicurus may tell his opponents that of two errors he prefers the less; it does not follow that he adopted either as his final position. The citation is quite irrelevant and need not cause further trouble. We proceed to deal with the question on its own merits.

The early Greek philosophers were keenly interested in the question of origins. Somewhere in the beginning of time there was a beginning of things or, at least, of things as they now are. Democritus attained a solution of the problem which was of first importance as a working solution of the scientific problem. It was at no time found satisfactory in every respect. Anaxagoras represented another line of thought which appeared to his contemporaries likely to be in many respects better. The difficulty most keenly felt was that which arose from the consideration of order in the universe. The method of Democritus seemed to involve an absurdity: he had, to quote a modern opponent of materialism, tried to prove that a shower of letters could result in a Shakespeare. Anaxagoras did at any rate face the problem of order so far as to declare that there was one overruling power that made for order in the universe. But still the difficulty remained that the idea of order seemed to necessitate an intelligent ruler of the universe. Plato, with his strong ethical trend of thought, found Anaxagoras unsatisfactory in this very respect; he desired to go farther and actually to assert that the world is not only intelligible but also derives that character from intelligence. In the recorded objections to Anaxagoras and such passages as *Laws*, 888 E, we can see the evolution of this point of view. A purely physical

doctrine really implies that reason works only in the sphere of art; the products of reason are therefore artificial; the State is only an artificial product, a secondary result inferior to the natural; while the natural is best but it is not rational. From this position there was no escape but one: art and Nature must be reconciled through reason and the world must be viewed as the supreme work of a supreme artist.

In solving this problem Plato created another. From his statements it seems as if the end of existence was not only the good but also a good which man could not avoid. Heracleitus, Anaxagoras, and Plato were united by the Stoics: the actual opponents whom Epicurus had to face were these latest advocates of a Reason which combined all the advantages of complete causality with an unblushing acknowledgment of fate. In one case particularly Stoicism was found wanting. Carneades went forth from the Stoic schools a wiser but also a sadder man: he determined to probe further this assertion of predetermination. He discovered what Chrysippus before him had been discovering, namely that Plato was not Aristotle and that it was worth while rethinking the Aristotelian idea of co-operating causes. History has repeated this movement in the life of J. S. Mill; he too found that the science of Hartley led to a mechanical system and inevitable necessity; he too denied that a belief in Freedom meant a return to chaos; in the mediating view of co-operating causes he found the solution of his difficulties.

The problem before Epicurus had two distinct aspects. The first is the question, What conception of causation will admit the idea of universal freedom? The second is the question, How can we explain the origin of the world on the fewest possible assumptions? The two aspects of the problem are united through the fact that both are problems of causation. The ultimate factors are declared to be matter and motion: the matter is of one kind, things being complexes of atoms; but there are different kinds of motion. If any differences are to be discovered in types of causation these will be expressible as different types of motion. We must therefore first consider the species of motion.

Epicurus recognised two main types of motion, that which is in a straight line and that which involves a deviation from the straight line. The former is motion *κατὰ στάθμην*: the latter *κατὰ παρέγκλισις* or declination. As motion is inherent in the nature of the atom, both these motions belonged to the atom before the formation of bodies. The most important point in the development between Democritus and Epicurus is the degree to which the concept of chaos was progressively

refined. One after another the writers discovered that the term was being used to cover a multitude of suppositions. The last to be detected and expelled was the notion that directions could be said to exist in a chaos. Directions, properly speaking, can exist only in a cosmos. In fact, the state of chaos, properly understood, is a state devoid altogether of predicates. Simplification, that most difficult of all philosophic tasks, was at last achieved, and it was understood that an atom in chaos has no relations; as soon as it has relations and predicates it has passed into a system and a cosmos.[1]

Now if a cosmos is essentially a system of things controlled by laws, where do these laws come from? The problem now is to describe accurately the process by which a world generates its own laws. Anaxagoras had seen the problem but solved it only by positing an agent, a force that made for order. Plato was, from the scientific standpoint, still more lavish of assumptions. If the Epicurean must not multiply entities beyond necessity, the origin of law must be found as immanent in the very process by which the cosmos forms itself. This was clearly the aim in view. Suppose then that we start with nothing but matter and motion. There will be in the first place no talk of up or down; still less will it be possible to use any teleological terms; we shall get rid of the latent assumptions of earlier physical theories and the explicit assumption of an end in the teleological sense. If motion can be described without any final cause or fixed end of motion, the terms used must refer solely to the parts of the vacuum traversed. Every body that moves changes its place and consequently generates a series of places which have a relation to each other. This series, the loci of the moving atom, constitutes a direction and in this respect the movement is *κατὰ στάθμην*. To avoid the infinite regress the atom is said to cause its own motion, and this is just as legitimate as putting before the first motion a first mover. Prior to the formation of the cosmos the movement would be purely indeterminate: for the atom would be free from any of the limitations which are imposed upon it so soon as it enters into relation with other atoms. There is therefore no objection to including among the other forms of motion that which is different from any actually generated series of motions. Such a motion is a

[1] For an example of the dialectic employed on this topic *v. Usener Epicurea*, § 279, and compare the points made in the Epistle to Herodotus. (*Usener*, pp. 18-22) especially the distinction of primary and perceptible (secondary) motions.

swerving, due entirely to the activity inherent in the atom. If we pause to ask why Epicurus reduced all motion to two types and no more, it seems obvious that this can be the only reason. There are exactly two because there can be only that which is and that which is not, the actual and the possible. This is, so to speak, the final disjunction: and the disjunctive proposition was one that engaged considerable attention at this period.[1]

The theory of declination, then, emerges as the product of that dialectic of chaos by which the concept was progressively refined. We may describe this, if we will, as Epicurus' myth of creation, a chapter of his book of genesis. It has at least the virtue of being wholly impersonal, and no one can doubt that the opponent of Plato and the Stoics desired to purge his system of all those elements which were derived from the idea of personal control. Providence in all its forms is ultimately an idea that starts from the notion of personal control: the elimination of the personal element makes the term Providence meaningless. The Stoics abandoned their own doctrine when they tried to explain what Providence could mean as the function of an impersonal Reason. Epicurus succeeded in stating his theory so as to avoid any suggestion of predetermination, especially that of motion in a given direction impressed by a Creator. From this statement it follows that laws are not antecedent decrees: they are purely the constraints of circumstances which arise so soon as the atoms come into contact one with another. Employing a later terminology we might say that to the atoms all motions are possible, bodies have only the motions that are compossible. The notion of weight did not trouble Epicurus in this connexion, for he had no clear idea of what is involved in gravitation: weight appears to have been added to motion in order to explain collision, which clearly requires momentum.

B.

So far we have nothing more than a dialectical treatment of the opponent's position. It has been shown that the physical philosopher tends to have a continuous regress of causes; he therefore asserts that a result can always be treated as an effect which, as the product of known causes, can always be completely known. But the first cause can-

[1] See *Usener*, p. 19, § 61, 62, where the meaning clearly is that definite movement is secondary and implies indefinite movement as the first hypothesis. For the disjunctive judgment *v. Usener*, § 376.

not be an effect; it cannot be explained on the same principles; it is beyond the range of science and belongs to dialectic.[1] If we press this question of a first cause we can show that the Fate of the physicists is really no more than that cause at which they chose to stop. What the physical philosopher had really done was to take cause as a necessary relation and then convert it into the idea of the necessity of relations, and finally into the necessity of just those relations which he found given. When this error has been detected we have achieved the first step, namely the negative criticism of the concept of fate. For the weaker brethren this will be enough; if the incubus of Fate is exorcised they can go on their way rejoicing; effort may not be intelligible, but it is at any rate not proved useless. Epicurus aimed to eliminate from the universe in which we live anything that keeps the soul of man in fear or subjection. He therefore tried to prove that human imagination is alone responsible for the two overshadowing powers, the gods of theological tradition and the Fate of the physicists. These two he united, as in the passage quoted above; and he proposed to reject them both. They are not an exhaustive statement of all possibilities; there is another possible view. This third position will now be explained.

The meaning of freedom is explained by Epicurus in the term *ἀδέσποτον*.[2] To be without a master is the condition of one who is a slave to nothing. The sense in which the Gods are the masters of men is too obvious to need explan-

[1] A remarkable statement on this point is found in Huxley, *Method and Results*, p. 103. "In the past history of the universe, back to that point [*i.e.*, the beginning of a universe out of one substratum and one energy], there can be no room for chance or disorder. But it is possible to raise the question whether this universe of simplest matter and definitely operating energy, may not itself be a product of evolution from a universe of such matter, in which the manifestations of energy were not definite—in which, for example, our laws of motion held good for some units and not for others, or for the same units at one time and not at another—and which would therefore be a real Epicurean chance-world."

Huxley finds the "air of this region of speculation too rarefied"; the ancients felt their limitations less keenly and Epicurus did not know enough science to shrink from a dialectical treatment of the very problem of which Huxley prefers to say, "ignoramus et ignorabimus". Epicurus would have agreed with Huxley's words: "Fact I know; and Law I know; but what is this Necessity save an empty shadow of my own mind's throwing?"

[2] A Platonic word used in *Rep.*, x., 617 E, in a connexion which is significant. Our mode of life, says Plato, is of necessity: yet virtue has no master and the responsibility remains ours: it is the universal, the major premise, that is given as something not ourselves but the particular choice is our own way of making for righteousness. For the Epicurean statement see *Usener*, p. 65, § 133.

ation. Fate is our master when understood as some power antecedent to man and predetermining the issues of all action. The fate here meant is particularly that of the Stoics. Cicero stated the nature of this Fate when he said "imposuistis in cervicibus nostris sempiternum dominum, quem dies et noctes timeremus". This is the "fatalis necessitas" which the Stoics call *εἱμαρμένη*. This concept of fate is attacked by Epicurus on both its logical and its physical side. His rejection of the disjunctive judgment, 'to-morrow Hermarchus will be either alive or dead,' is a denial of predestination, a denial of the doctrine that a necessity of thought involves a necessity of existence. His opposition to the determinism which results from the Stoic pantheism is not a simple refusal to accept it, but the maintenance, in opposition to it, of the idea of concausation. A passage in Diogenes Laertius describes the ideal man as having no belief in necessity, links freedom with responsibility, and says that some things are referred to fortune, some to ourselves. This is clearly a reversion to the position of Aristotle: Epicurus develops the doctrine of Aristotle as a counterblast to the Stoic development of Platonism. The real doctrine of freedom taught by Epicurus is simply the later doctrine which arose from the idea of man as being *συναίτιός πως*.

If we examine the history of Stoicism we find a slow process of modification going on within the school. On the one hand Epicureanism was losing its significance as the opponent of Stoicism: on the other, Stoicism was returning (in Posidonius) to the Platonism from which it started. Carneades saw clearly the essential feature of the situation and his point of view forms the culmination of this dialectic struggle. Epicurus really attained his end when he dethroned Necessity. It was left to Carneades to build up a new position that could rank definitely as a philosophical "platform". Looking first at the development of Stoicism we find a modification of the original fatalism in the teaching of Chrysippus. He seems to have been aware of its evil effects on character; he tried to break the chain of causation and leave the future undetermined though the past was completely necessary. In this attempt he too employed the idea of co-operating causes. The example he chose was that of a cylinder in motion: the mover is the cause of the motion, but the nature of the movement is determined by the nature of the cylinder. Similarly the object presented to the mind necessitates some motion but the nature of the motion is to be ascribed partly to the mind. The doctrine of assent (*συγκατάθεσις*) was a point in which the Stoics had also admitted mental activity as a factor in

choice. These attempts to make room for freedom in a system essentially fatalistic show that the problem was appreciated. It was approached from the side of co-operating causes. Failure was, however, inevitable so long as the factors in the causation were already determined. The "mind" of which Chrysippus is speaking is endowed with definite activities that have come to it from without: it belongs substantially to a world which has substantial laws, *i.e.*, modes of action inherent in its substance. A mind that is part of a whole whose laws it must fulfil, cannot be set free. The crucial difference between Stoic and Epicurean consists in the fact that for the Stoic a cause is a reality inherent in a substance, for the Epicurean it is an attribute: the Stoic can distinguish between active and passive matter; for the Epicurean all matter is active: the Stoic can speak of intelligent efficient causes, the Epicurean only of physical laws. The Stoic was unable to employ successfully the idea of co-operating causes in order to establish liberty because the co-operating factors were determined already by implication. Epicurus had thrust his indeterminism back to the very beginning, and was therefore free to employ it throughout. The evidence that it was employed and the particular form the argument took are to be found in Cicero, *De Fato*, xi. Carneades is there represented as blaming the Epicureans for deducing the defence of freedom from the doctrine of declination: it would have been better to deny necessity on the ground that there is such a thing as voluntary motion. Voluntary motion is the antithesis of necessity because necessity implies a cause which is antecedent and external: voluntary motion has no antecedent and external cause. We cannot however say that voluntary motion is causeless; on the contrary there is a cause but it is a cause which is identical with the nature of the agent. The mistake made by Epicurus therefore was in going out of his way to prove this point in physics, namely that the cause is identical with the nature of the agent: he might just as well have started from the practical question and proved it directly in reference to man. By this time no one seemed to care whether an atom was or was not free: for Epicurus the question arose in a different context.

The position taken by Carneades must be judged in relation to his psychology. With a power of analysis which has hardly received the attention it deserves, Carneades eliminated from the object all such causality as determined the mind: he especially opposed the idea that the quality of

compelling assent could belong to an object:[1] and if he thereby lost a criterion of truth he gained what was more important, an activity of the practical reason wholly unimpeded by metaphysical presuppositions. Carneades, as we know, was a hearer of the Stoic teachers who ended by finding their doctrine unsatisfactory. We see here exactly how he differed from his teachers. Their doctrine of assent was vitiated by trying to make the nature of the object a direct cause of the assent. This intrusion of Fate into the analysis of knowledge did not please Carneades. He desired to get nearer to a pure analysis of experience: for him conviction was the end of a process of deliberation that had no such extra-mental factors. For him the factors which produce assent are reasons rather than causes, logical antecedents rather than physical (objective) attributes. In thus making certainty a conviction towards which a man may freely move, Carneades removed one more stone from the foundations of Stoicism. The work of this period is essentially the destruction of idols: the metaphysics of pure reason give place to the justification of the practical reason. It is man rather than the universe that occupies attention, and effort is limited to getting a clarified view of the means by which men reach the conditions from which action results.

C.

These considerations show that the Doctrine of Epicurus was part of a movement in which the Stoic joined and which was completed outside the limits of either school. The elimination of Fate has been carried out in connexion with physical and epistemological problems. A brief review of the ethical position will close the subject.

For a doctrine which is intended to give a middle course between fatalism and the denial of causation, the permanent conditions of human action are of primary importance. Epicurus mentions the limitations of human power and these coincide with the limitations already mentioned by Aristotle. The heavenly bodies have a kind of necessity which regulates their course: the stars may have received an impulse from east to west by the appointment of Fate. These are cases of *οὐκ ἐνδεχόμενα ἄλλως ἔχειν*: the instances

[1] The credit of beginning this attack belongs to Arcesilas. In *Sext. Emp.*, vii., 411 (p. 451), the expression used is *οὐ τοίνον ἔχει τι ἰδίωμα ἡ καταληπτικὴ φαντασία.* In other words the Sceptics deny the objectivity of certainty or the existence of an objective *cause* of certainty.

correspond to the ἀίδιοι κινήσεις of Aristotle's ἀστρολογία. Epicurus does not care how these facts are explained, for this is the kind of scientific fact which seems to him devoid of relation to our actions. Some had, indeed, made these facts an important element in human life: the astrologer went beyond his limits and made astronomy into a pseudo-science of fate. So, on the one hand, Epicurus is anxious to explain away the superstitions that attach to the movements of the stars, while he realises the fact that the order of Nature is not the cause of our actions but the sum of conditions under which we act. But here the question arises: where do these limitations cease? Is not man, though free from external compulsion, still the victim of forces within himself, the slave of passions and desires from which his nature is never free? This question Epicurus answered in a way that appears now to be ludicrously inadequate. Having no knowledge of the peculiar problems that arise from the idea of inherited dispositions he can adopt the optimistic view common to Greek writers and maintain that our natural passions or desires are few, and Nature provides for them abundantly. It is interesting to note here how the Epicurean view comes midway between that of the Greek poets and a modern view. The poets had embodied the idea of inherited sin in their conception of divine justice: Epicurus lost this point of view partly through his desire to emphasise the freedom of the individual and partly through his "atheism". Modern determinism frequently revives the essential elements of the Æschylean view in its interpretation of the natural limitations of action. Epicurus established for his own time one important point. The Stoic inclined to overwhelm the individual by impressing on him his relation to the Whole: Epicurus aims at showing that the Whole comes into consideration only in very few and simple manifestations. Life as we actually live it is not an affair into which the Whole as such can be said to enter: it is rather a series of interactions between one part and the adjacent parts, between man and his immediate surroundings; so that we can follow Aristotle in eliminating the irrelevant and clearly marking out the sphere in which deliberation is the efficient cause of action.

The ground is now cleared for that statement of freedom which satisfies the demand for moral responsibility on the one hand and cheerful self-reliance on the other. All anterior causes, whether gods or fate or the universe, have been removed. Nothing is fore-ordained and all that happens is the result of man's activity combined with those other ac-

tivities which he recognises as co-operating causes. It is true that effects still arise that cannot be foreseen, but these are due to causes that have been overlooked, not to superhuman agents. The element of chance is reducible to cases of miscalculation and for these there is the simple cure which consists in taking more care and developing the reason as a power of shrewd calculation. The possibility of foreseeing effects implies the reign of law, not law in the sense of fiat or antecedent cause, but natural laws, the law-abiding character of a universe which is free from capricious elements. To secure this reign of law it was necessary to destroy the gods of popular superstition and identify Fate with natural causes, and this Epicurus seems to have done.

It would not be a profitable undertaking to criticise the Epicurean theory from the point of view which a modern theory of conduct adopts. The antitheses of necessity and freedom, whole and part, cause and condition we still have with us; but little more than the form of this opposition is common to ancient and modern thought. In the sixteenth and seventeenth centuries a revival of ancient systems served a different purpose, and a better understanding of those periods is part of the gain derived from a reconsideration of Greek doctrines. Epicureanism so quickly contracted the odour of unsanctity that it rarely commanded a fair hearing of its case. If the historian of philosophy made more clear the fact that the antithesis of Stoic and Epicurean methods depended on the exact way in which the thinkers of the fourth and third centuries B.C. interpreted their predecessors, the later revivals would be more intelligible. Stoicism shows clearly the relation which it bears to Platonism, and its history shows still more clearly that its only principle of development was to expurgate those exaggerations which at first gave it an appearance of originality. The extent to which Epicureanism was grounded in Aristotle and the way in which its affinities to Stoicism no less than its divergences arise from the fact that it took the Aristotelian rather than the Platonic colouring, have never been so obvious. Considered in this light the doctrine ceases to be merely a shallow defence of pleasure even in the sense of rational well-being: it becomes rather one of the fundamental moods of mankind and if it was ever true to say that every man is born either a Platonist or an Aristotelian it is more true that every system of philosophy inclines to be Stoic or Epicurean. Stoicism has been the ally of religion and lives again in the literature of the Fathers and the rhetoric of exhortation; Epicureanism has had comparatively few

able exponents and its latent cynicism has tended to make it an object of aversion; yet whether we study it as it appeared in the days of Epicurus or of Hobbes the same thing can be said of it: "It is poor immoral [stuff]! so you might say in the pulpit, but you know that it probes very deep".[1]

[1] *The Philosophy of Hobbes*, an Essay by the late W. G. Pogson Smith, p. ix., in Hobbes's *Leviathan*, Oxford, 1909. Since writing the above I have seen M. Émile Bréhier's work *Chrysippe*. This contains an interesting account of the attempts made by Chrysippus to meet the attacks on Stoicism. I have only referred to these. One point is of special interest. Causality for the ancients implied primarily the existence of agencies that come on the stage as independent actors: hence the idea of a chain of causation was an innovation: but this is not destiny unless we can prove that there are not several chains or series of causes existing at one and the same time. The required unity was obtained by the hypothesis of sympathy (Bréhier, 185-186). The opening for the opponent's attack is obvious. In view of the traditional opposition between Theism and Epicureanism it is permissible to direct attention to Dr. Ward's lectures (The Realm of Ends, Leath: xiii., xiv.)

V.—CRITICAL NOTICES.

Platonische Aufsätze. Otto Apelt. Leipzig and Berlin: B. G. Teubner, 1912. Pp. v, 296.

Dr. Apelt's already established reputation as a writer on the history of Greek Philosophy, and an editor of Plato, is fairly sure to act of itself as a strong recommendation of this volume of essays to the student. The essays contained in it are twelve in number, and eight of them now appear for the first time. Of these twelve papers, the last two, which are studies of the two dialogues *Hippias* and the *Sophistes* will perhaps appeal mainly to the special student; the remaining ten, which deal with such topics as "The Place Above the Heavens," "The Humour of Plato," "The Statesman's Problem," "Plato's Theory of Punishment," are addressed equally to the reader of general culture. There are many excellent features which mark the whole presentment of the topics chosen for exposition. Dr. Apelt writes clearly and vigorously, he lays full stress on the important point that the *Dialogues* do not present us with a ready-made artificial system, self-identical from first to last, but show us Platonic philosophy in the making, and he rightly makes the greatest use of the ripe wisdom of Plato's old age as garnered for us in the magnificent, though too often neglected, *Laws*. He has a genuine enthusiasm for his author, particularly as the first philosopher to formulate and illustrate with his marvellous eloquence the great ideals which give human life its worth. It need hardly be said that even in his most "popular" pages his work is that of a scholar well-read in the criticism and exegesis of scholars who have gone before him.

At the same time Dr. Apelt exhibits from first to last a certain bias which, as I think, often stands in the way of correct interpretation of special passages, and even prevents his work from doing full justice to the Platonic type of philosophy. He writes not only as a scholar but as an adherent of a specific philosophical school, and this leads him, as I think I can show, sometimes to expound Plato unnaturally in order to find the modern views which commend themselves to him in the text of the *Dialogues*, sometimes to belittle the value of a Platonic doctrine because it does not fit in as closely as might be wished with the special doctrines of his own school. In fact, in the bulk of the essays, which deal with Plato's ethical and theological position, so much stress is laid on the conception of Plato as an imperfectly enlightened "precursor" of Kant, and in the treatment of the *Sophistes*

Plato is so severely handled for not having anticipated certain, as I hold, largely mistaken theories of Fries and the younger Reinhold, that an ordinary reader might be pardoned for wondering that Dr. Apelt should bestow so much praise on a philosopher who, by his own showing, fell into so many and so obvious mistakes. The curious thing is that Dr. Apelt repeatedly subjoins to his unfavourable criticisms the very observations which form their best refutation. In more than one essay the criticisms read as if they were first impressions followed by more considered afterthoughts which really destroy the whole effect of the original comments. Now, while I heartily agree with the principles of exegesis laid down by the author, as well as with much that he says of the analogies between Platonism and Kant, I cannot satisfy myself that where there is a genuine divergence between the two philosophies, Kant always, or even usually, has the advantage on his side. And I feel convinced that the logical doctrines on the strength of which much of the *Sophistes* is condemned are little better than antiquated confusions from which the development of modern exact logic has happily delivered us. I propose, therefore, to dwell on some of the points raised, with a view to suggesting that Plato is not really open to the criticisms his exponent passes on him, as well as to discussing a few pieces of special exegesis in which Dr. Apelt seems to me probably or certainly mistaken. I may begin by making two general observations which affect most of the essays. Dr. Apelt rightly lays stress on the point that Plato's dialogues are all strictly dramas, and that his "Socrates" is a dramatic character. He does not, however, seem to me to have considered the natural inference from this fact, *viz.*, that the *dramatis persona* "Socrates" is presumably modelled in a highly realistic way upon his prototype, the son of Sophroniscus. Hence he tends too readily to regard him as a "mask" for the author of the dialogues, and, for example, to regard the unmeasured condemnation of δημοκρατία in the *Gorgias* and *Republic* as an expression of Plato's personal feelings. I think this very common view highly improbable. Not only do we find quite a different spirit in the discussions of the *Politicus* and *Laws* about δημοκρατία, where Socrates is not the speaker; this might be explained, as it is by Dr. Apelt, on the supposition that Plato's political judgments became milder as he grew older. But what we have to explain is (1) the inconsistency with the tone of the seventh *Epistle*, which shows that Plato felt no violent personal prejudice against democracy as such, and had even at first hoped to play a statesman's part in the revived democracy of the fourth century, and (2) the striking fact that the δῆμος depicted in the *Gorgias* and *Republic* is quite unmistakably that of the Periclean age, as it showed itself in the life-and-death struggle of the Peloponnesian war. *This* kind of democracy—the democracy of Imperial Athens—passed away for ever in Plato's early manhood, and it is therefore hard to explain why he should have felt so bitterly about the

defects of a past *régime.* The language of the *Gorgias* and *Republic* reads much more naturally if we take it as reflecting the actual sentiments of a shrewd and brave old man who had known the Periclean system in its highest splendour and learned by bitter personal experience how its ἀδικία, its inherent vice of reckless "Imperialism," had led to the chaos and shame of the years from the surrender of Nicias—the real end of the Periclean democracy—to the catastrophe of 404-403.[1] So, to take one or two minor instances—it is, I think, a sad mistake in judgment and taste to say with Dr. Apelt that Diotima in the *Symposium* is a "mask" for Plato himself. For, in that case, the well-known words in which Diotima hints that there are mysteries higher than those into which Socrates can be initiated must be understood, as Dr. Apelt seems to understand them, to be a disciple's claim to be greater than his master. One hesitates to find Plato guilty of this piece of self-praise, and I would suggest that Dr. Apelt has been led astray by failure to see the intentional humour of the passage. The words are, I suggest, merely a witty device to save Socrates from standing committed too deeply to the "mystic" doctrines. As Prof. Burnet has said, Socrates in Plato is regularly represented as impressed by certain mystic doctrines, and holding that in their main outlines they are probably near the truth, but he never quite commits himself to the details of the ἱερὸς λόγος; his pawky "irony" stands in the way. So the hint that the imaginative splendours of the "beatific vision," as expounded by Diotima, are beyond the reach of Socrates seems to me a mere device to lay the responsibility for the account of it on other shoulders. The point has its importance, because, if Diotima means Plato, we shall have to regard Plato as personally a thoroughgoing mystic, whereas, in point of fact, the markedly mystical strain hardly appears in his dialogues except when either Socrates or a Pythagorean is the speaker. In my own judgment this means that Plato was not personally much of a mystic at all, though he well knew that his master had been so. This conclusion should be welcome to Dr. Apelt who cherishes a violent hatred of mysticism, as becomes a Neo-Kantian, and repeatedly complains that Plato has allowed mystic tendencies to spoil his philosophy. My own estimate of the worth of the mystical experience is very different from Dr. Apelt's, but I feel bound to record my opinion that the mystic who inspired the *Symposium* and *Phædrus* was not Plato, but Plato's friend and teacher, the son of Sophroniscus.

Another case in which Dr. Apelt, to my mind, goes seriously wrong in the same way is his attempted identification of the Callicles who expounds the theory of the "Super-man" in the *Gorgias* with Alcibiades. The argument for the identification is

[1] Who was it who, in 406, was "in love with philosophy and *Alcibiades*? Certainly not Plato the son of Ariston.

roughly as follows: (1) Callicles is described as a person who has recently taken up active political life, and has a personal regard for Socrates though he regards the Socratic moral and political ideal as moonshine. But no politician of the name is known to us. Therefore "Callicles" is plainly a pseudonym for some distinguished Athenian statesman. (2) That this statesman is Alcibiades is probable both because the combination of personal feeling for Socrates with political Machiavellianism suits his character, and because the dramatic date of the *Gorgias* is fixed as being *c.* 427, (when Alcibiades would be just at the right age to be entering on his political career), since the presence of Gorgias in Athens is explained by his connexion with the Sicilian embassy of that year. (3) Alcibiades is called in the dialogue ὁ Κλεινίεως οὗτος, and the οὗτος implies that he is present at the conversation. But *if* he is present, Callicles is the only character with whom he can be identified. To all these arguments there is, as I think, a complete rejoinder. (1) We have no certain instance in the Platonic dialogues of a purely fictitious character, or of the use of a feigned name as a disguise for an actual person. With a very few exceptions the personages of Plato's prose dramas are all known to us independently as actual personages of the fifth century. The exceptions are Callicles, Diotima, Timæus, Philebus, and his friend Protarchus, the Eleatic of the *Sophistes* and the Athenian of the *Laws*. If any of Plato's characters are merely imaginary, one would think these two last, who have not even names, should be so. Yet the Athenian of the *Laws* is incidentally described in a way which fairly proves that he is meant for the actual Plato. He is an Athenian citizen, an old man, a representative of the doctrines of the Academy, who had personal experience of association with a young and ardent "tyrant," and could speak from that experience of the possibilities of reform offered by the combination of a youthful tyrant with an elderly philosophic adviser. All this, I submit, makes the identification almost certain. The Eleatic stranger can no longer be identified, but careful reading of the dialogues in which he appears will show that he has a very definite dramatic character of his own, so realistically drawn as to suggest strongly that he is copied from a real original whose name Plato could have given if he had chosen to do so. He is quite unlike any of the merely fictitious persons of the modern philosophic dialogue (*e.g.*, Berkeley's Hylas), who are mere mouthpieces for the opinions they are made to utter. The vastly preponderating probability, then, is that the four or five named characters whom we only know from the dialogues are also real persons figuring under their actual names. And there is no earthly reason why there should not have been a person called Callicles who did take some part—not necessarily a long-continued or prominent part—in Athenian politics during the Great War, but happens not to be mentioned by the historians or in such inscriptions of the

time as are already known to us. Not to say that if Dr. Apelt were right in fixing the dramatic date of the *Gorgias* in 427, the sentiments of Callicles would hardly fit what we know of the earliest phase of Alcibiades's public career. But (2) the assumed date is certainly not 427. The only detailed reference to a political event in the conversation is the allusion to the behaviour of Socrates in the famous trial of the Arginusæ generals, which is said to have happened "last year" (473 e). This fixes the conversation to some time in 405-404, and he would be a bold man who would say that no one can have taken a part in the public affairs of that unhappy and confused time except the few persons whose names have been preserved independently of Plato. At *this* date Alcibiades could not have been present in Athens as he was living in banishment. There is nothing to set against this reasoning except the fact that Pericles is said to be "lately" dead, and that Gorgias is not independently known to have been in Athens in the last year of the war. This is, however, of no moment. Against the loose reference to the "recent" death of Pericles we have to set the way in which he is ranked in the elaborate discussion of *Gorg.* 515 ff., with such famous politicians as Miltiades, Themistocles, Cimon, all of whom are throughout recognised as belonging to the past. (Thus, *e.g.*, the words used of the revolt of the advanced democrats from the domination of Pericles "at the end of his life" in 515 e-516 a, clearly imply that the facts mentioned are far from being events which had occurred within a year or two of the time in which Socrates is speaking.) And it is idle to argue that because we know that Gorgias was in Athens in 427 he cannot have been there at any other date. Dr. Apelt's whole argument is, in fact, topsy-turvy. If there is any anachronism at all in the *Gorgias*, it should rather be sought in the incidental allusion to the "recency" of Pericles's death than in the whole structure of the dialogue. As to the argument from the use of the pronoun οὗτος, it is naught. Two examples of the same usage, where οὗτος is conjoined with the name of some one who is demonstrably *not* present will be enough to prove the point. Thus we have from Plato himself *Protagoras*, 318 b, τούτου τοῦ νεανίσκου τοῦ νῦν νεωστὶ ἐπιδημοῦντος, Ζευξίππου τοῦ Ἡρακλεώτου, where the words which immediately follow, καὶ ἀφικόμενος παρ' αὐτόν, ὥσπερ παρὰ σὲ νῦν, show that Zeuxis is not present, and again from Euripides, *H. F.* 40 ὁ καινὸς οὗτος τῆσδε γῆς ἄρχων Λύκος, said of a personage who does not appear on the stage before, *v.* 140.[1] Another important

[1] It is an indication that Plato's Callicles is an historical person that we are incidentally told in passing that he was an Acharnian. There would be no point in recording such a detail if it were merely imaginary. Is any light thrown on the matter by the existence of a later "orator," Callicles, son of Arrhenides (Theopompus, *ap.* Plutarch, *Vit. Alcibiadis*, 5)?' This might well be the grandson of a Callicles of the years at the end of the Decelean war.

matter of principle in which I cannot follow the author is that he persists throughout his work in identifying the Platonic εἶδος with a universal, in the sense of a predicate belonging equally to every member of some group of sensible things, and therefore to be discovered by a process of mere abstraction, an *allgemeines Merkmal*, as he calls it. From this point of view it is, of course, obvious that Plato's whole doctrine involves a vicious "hypostatisation" of notions, and is condemned by the Kantian rejection of the possibility of "knowledge through mere concepts". But what is overlooked here is that Plato always insists just on the point that the εἶδος is *not* what is present *alike* in all the members of a class," but a standard or norm which is not, in its purity, present in any of them, but to which they exhibit varying degrees of approximation. This is why the believers in εἴδη are always said to "posit" or "postulate" (τιθέναι, τίθεσθαι) the εἶδος. The process is not that of "abstraction," but of "postulating" an upper limit, never *given* in sense-perception, to a comparative series. And I would remind Dr. Apelt that his distinguished contemporary Dr. Cassirer, whom no one will charge with want of reverence for Kant, only recently published an important work which has as its main theses the propositions that the supreme principles of science *are* exactly like Platonic εἴδη, postulates of this kind, and that the philosophical analysis of science suffers from the tendency to reduce scientific laws to the status of the mere Aristotelian "universal, which is equally present in every member of a class" more seriously than from any other prejudice. The real question at issue is whether the fundamental concepts of science are products of abstraction at all or products of the process of "passing to the limit". If the second view is true, it follows at once that Plato is right in treating what he calls εἴδη as individual objects of a higher order than sensible things, and that the Kantian assumption that "knowledge through mere concepts" is impossible because the subject of a valid proposition must always be an object given in sense-perception is simply false. To put the matter in a slightly different way, Kant, like Aristotle, assumes that all judgments, or at least all true judgments, can be reduced to the *predicative* form *A* is *B* (where "is" is merely a sign of predication); Plato assumes that predications themselves on analysis are discovered to be reducible to affirmations of relation, which are non-predicative. (Thus for him, *A* is *B* is a way of saying *A* "partakes of" *the* B, where "*the* B" is as much an individual as A, and there is no predicate in the proper sense of the word.) It seems to me that the modern creation of the logic of Relations shows that Kant and Aristotle are wrong; whether Plato is absolutely right or not will depend on the question whether predication is an irreducible type of affirmation, by the side of the affirmation of relations, or whether the

copulas of the predicative judgment, the "is a" and "are," are themselves simply relations among others.[1]

The effects of Dr. Apelt's identification of "judgments" with "predications" come out clearly in his criticism of the Platonic treatment of the problem of the μὴ ὄν in the *Sophistes*. An assertion in which the terms are both pure concepts, such as "riches are not wisdom," he says, is not a judgment at all, but, according to a distinction drawn by Reinhold, a mere "formula of comparison". Not being a true judgment, such a statement does not fall under the laws defining true negation (*i.e.*, those of Contradiction and Excluded Middle), and Plato's account of μὴ ὄν as ἕτερον is correct and adequate so far as such a formula is concerned. It only means that the concept "riches" is a different concept from "wisdom". As the Law of Contradiction only applies to the true predication, where the subject is not a concept but a thing, Dr. Apelt adds, the assertions "riches are wisdom" and "riches are not wisdom" may both be true at once. What Plato's analysis does not make clear is that in true predication, where the Law of Contradiction applies, negation is more than mere diversity; it is exclusion. Plato occasionally divines that τὸ ἐναντίον is not the same as τὸ ἕτερον, but he cannot, like Aristotle, give a clear account of the difference, because his account of μὴ ὄν is primarily based on consideration of "formulæ of comparison" which are not genuine predications. Aristotle, implicitly recognising the Kantian principle that all judgment is predication about an object given in experience, dismisses the "formula of comparison" as a πρότασις ἀδιόριστος. Further it is a consequence of Plato's original error of confusing *apparent* predications, in which the subject is a concept, with real predications that he confuses *qualitative* with *modal* affirmation and negation. That is, he confuses the "is" or "is a" of predication with the "is" of the existential judgment, and consequently also confounds the *qualitative* not-being of predication with the *modal* not-being of the existential proposition. Hence he is the true author of all the attempts of Fichte, Schelling and Hegel to transcend Kant's limitation of knowledge to objects of possible sense-experience.

For my own part, I cannot admit the full justice of these criticisms. To begin with, it seems to me a mere dogma that a proposition without a subject and predicate falls outside the sphere of applicability of the Law of Contradiction. Such a proposition is, of course, not a predication; when I say "riches are not wisdom," "riches" and "wisdom" are not subject and predicate, and *are* is not the "copula". The "are" in this statement means identity. I mean to say that the concept "riches" is not identical with the

[1] Dr. Apelt, I observe, does not see that there is a difference in logical type between propositions of the type "x is a y," and those of the type "all (some) x's are y's".

concept "wisdom". And it is true, as Dr. Apelt observes, that my statement leaves it an open possibility that in point of fact all rich persons may be wise, or again none of them may be wise, or some may be wise and some not. Yet the assertion has a definite meaning and a definite function.

It is true to say that "riches" and "wisdom" are not one and the same concept, and it would be false to say that they are. Every concept is identical with itself, and no concept is identical with any other, and it is often important to be aware of this. Thus "riches are the same as wisdom" and "riches are not the same as wisdom" do stand in contradictory opposition, just as "Saul is Paul" and "Saul is not Paul" do. Both pairs of statements are in fact *singular* enunciations. Moreover, though any one is, of course, at liberty to define a "judgment" as a predication he must, if he does so, recognise that "judgments" are not the only assertions which can be definitely true or false. Most of the propositions of the mathematical sciences will, in fact, not be "judgments," if we adopt the proposed terminology, since they consist of terms related not as subject and predicate, but by such relations as equality, inequality (whether further determined in sense or not). So no proposition expressed by an ordinary transitive verb with grammatical subject and object will be a "judgment". It is obvious, *e.g.*, to common sense that when I say "David loves Jonathan," the real terms of the assertion are "David" and "Jonathan," and that the *copula* indicating the mode of their relation is "loves". Logically this proposition is prior to that which Aristotelian logic substitutes for it, *viz.*, "David *is a* lover of Jonathan".

I doubt again whether Dr. Apelt has any right to his theory that Aristotle's refusal to admit "indefinite" propositions has special reference to the alleged distinction between "formulæ of comparison" and true "judgments". As the examples quoted by Dr. Apelt himself go to prove, Aristotle means by ἀδιόριστοι προτάσεις simply propositions which are not fully quantified, and are therefore ambiguous. *E.g.*, "men are white," one of Aristotle's own examples, is emphatically *not* a "formula of comparison" with concepts for its terms. It has a subject which is a "possible object of sense-experience," and is definitively predicative in form. Its fault is merely the ambiguity arising from absence of the mark of quantity. On the other hand, the "formula of comparison" in which "is" stands for "is identical with" does *not* suffer from *this* ambiguity as it is always strictly singular. *E.g.*, "riches are not wisdom" would be in Aristotelian Greek οὐκ ἔστι τὸ πλουσίῳ εἶναι τὸ σοφῷ εἶναι, a proposition of a type familiar enough in Aristotle's philosophy.

Further I submit that Dr. Apelt's view that there is an unbridgeable gulf between the predication and the existential proposition (which he seems to confuse with the assertion of an identity), is hardly consistent with the fact that every predication can be

thrown into the existential form, as is actually done, in various ways, in the different symbolisms of exact logic, Thus "all x's are y's" readily becomes "there is no such thing as an x which is not a y," or again: "The class of x's which are not y's does not exist," and so forth. Hence I suspect that Dr. Apelt's anxiety to expose the errors of the would-be improvers on Kant has led him to charge Plato with faults which he does not really exhibit. It may still be said that Plato does not fully follow up the consequences of his own admission that τὸ ἐναντίον is not identical with τὸ ἕτερον. But, after all, it was hardly necessary for his purpose that he should do so. If what Dr. Apelt calls a "formula of comparison" can be significantly contradicted, as I think it clearly can, this of itself shows that falsehood and significant denial are both possible, and for the purposes of the *Sophistes*, it is enough to have proved so much.

Space fails me to speak of many other points of interest which I would gladly dwell on. I am delighted by Dr. Apelt's highly ingenious defence of the genuineness of the *Ion* and the *Greater Hippias*. His suggestion that the object of the latter is to remove misconceptions which the *Lesser Hippias* might have put into slow-witted heads as to the moral earnestness of Socrates and his followers is, at least, well worthy of consideration.

There are a number of passages where Dr. Apelt's exegesis seems to me odd, and occasionally I think he makes curious mistakes about the grammatical sense of simple words. Thus I do not think he need have given so much of his essay on "The Value of Life" up to a laboured proof that the comparison in the *Laws* of men with puppets, whose strings are worked by God, does not indicate a pessimistic view of life. It is our most optimistic of modern English poets who says in the last lines of his most optimistic work: "All service ranks alike with God, *Whose puppets are we*". So again it is the same thought which Shakespeare expresses in the far from pessimistic phrase about the "divinity that shapes our ends". I do not see why Dr. Apelt should think it necessary to emend Plato's own explanation that he does not mean to belittle man's life by the comparison, but is only speaking πρὸς τὸν θεὸν ἀπιδὼν καὶ παθών (804 B.) by changing παθὼν to ποθῶν. Stallbaum's explanation that παθὼν = ὑπὸ τούτου παθὼν seems much more reasonable; thus the sense will be "I spoke with an emotion caused by a comparison (*cf.* the use of ἀποβλέπειν in *Rep.*, 501 b, 1.) of God with man": still less can I understand how any man of Dr. Apelt's intelligence can suggest that the development of the notion of philosophy as a μελέτη θανάτου in the *Phaedo* is an "artige Mystifikation". Plato is indeed no pessimist, but that does not prevent him from holding that the life of a φιλόσοφος in a badly-governed city which has made no provision, as the city of the *Republic* does, for his education in "true music" from his earliest years may demand both retirement from the world and mortification of the affections and lusts. Besides, the passage is

highly dramatic. The treatment of Socrates and Chaerephon by Aristophanes is surely enough to show that the leading personages of the *Phaedo* did set a higher value on the ascetic life than perhaps Plato did, even in the mood in which he wrote the dialogue. He professes simply to tell us how they thought and talked; there is no need to suppose either that he shared all their views, or that he stooped to use the death-bed of Socrates as an opportunity for mystifications which, in the circumstances, would be anything but "artig". So again among many other strange things contained in the essay on Plato's humour, I find it exceedingly odd that we should be required to understand the famous passage, *Laws*, 896, as a joke, on pain of otherwise having to credit Plato with belief in a Manichæan devil. The plain sense of the passage, usually missed by the exponents of Plato, is simply that since there is undeniably evil and disorder in the world, and since soul is the only source of all processes, there must be at least one soul or mind in the Universe which is not God. For God produces only order and good. There must then be at least one more or less bad soul, and, as Plato says, there may be any number. Since bad men exist, it is clear that the argument does not imply the existence of the Devil, or even of devils in the plural. So long as you admit that there is at any rate one sinful being, Plato's conditions are satisfied.

I am equally puzzled by the severity of some of Dr. Apelt's strictures on the *Republic*. He complains that the philosopher-kings and their soldiery are allowed to use the mass of the citizens as a "milch cow" and that both classes have really next to nothing in the way of public service to perform. Surely he forgets that they are not allowed to milk the cow to any great extent, as they are required to live in perpetual garrison, receiving nothing but their daily bread and their clothing. And there would be little opportunity for idleness. The mere application of the Platonic principles to the arrangement of marriage, with the minute personal study of the physical and moral history of the persons to be mated which they imply, would of itself provide a fair number of philosopher-kings with the work of a life-time. And the ἐπίκουροι, being required to act as the executive of the community, would have all the direction and control which, even in the best of States, demands a permanent police force put into their hands. Plato himself never loses sight of this. His assumption is that the burden of office is to be so great that a good man will only take it up because he dare not entrust it to less competent hands, and far from intending, as Dr. Apelt suggests, that his kings shall be leisured mathematicians and astronomers with a State endowment, he expressly insists that for the best years of their lives they must be forced to "descend once more into the cave" and busy themselves with the heavy task of administration. Perhaps Dr. Apelt thinks that the ideal city, once set going, will run of itself. The author of the *Republic* was of another opinion.

A. E. Taylor.

Development and Purpose: An Essay towards a Philosophy of Evolution. By L. T. HOBHOUSE, Martin White Professor of Sociology in the University of London. London: Macmillan, 1913. Pp. xxix, 383. Price 10s. net.

IN an exceedingly valuable Introduction, Prof. Hobhouse explains the genesis of the present work. Sympathising in the beginning with Herbert Spencer's view of the relation between Philosophy and Science, and with the Positivist attitude to "Humanity," and distrusting the "spiritual" philosophy of Green and Caird, he has been led by a prolonged study of evolutionary phenomena to a doctrine of necessary progress, as determined by the development of mind, and not by the struggle for existence. This position he has completed, in the present work, by a theory of first principles, corroborating his empirical conclusions.

Thus Book i., "The Lines of Development," is in the main a survey of empirical fact, leading up to Book ii., "The Conditions of Development," which is in the main an abstract argument.

The watchword of the whole treatise is "conditioned purpose". The watchword of the earlier part, which traces the *de facto* triumph of purpose over its conditions, is "correlation". The power to correlate is the measure of the emerging intelligence. As mental correlation progresses, *in* the struggle for existence, but not created by it, conditions, which at first operated darkly below the surface upon the purposive mind, are gradually brought within it as influences which it learns to discount and to control. And in proportion to the correlation of stimulus with response, of thing with thing, of universal connexion with universal connexion, the initial conditioned purpose advances towards supreme control over its conditions.

For the author the climax of this triumph is attained by the social mind in its larger unities, and ultimately, we are to expect, in the mind of organised humanity. The whole movement of our terrestrial world will one day take its direction, no longer from natural circumstance and isolated effort, but from the purpose of comprehensive and triumphant mind. We are shown the conception of harmonious development becoming *pari passu* the basis of social action, of ethics, and of religion, which will presuppose the moral indifference of Nature, and find in justice, the right relation of man to man, the highest spiritual achievement.

When we turn to Book ii. we are confronted with the question how far the nature of reality supports the doctrine of progress which empirical observation has suggested. The general treatment of the validity of knowledge proceeds on the lines of what has been called the "coherence theory," strictly repudiating any approach to psychological idealism. It is noteworthy that even this logical problem is dominated for the author by the conception of progress rather than that of finality. Validity means that knowledge will

continue to grow, consistently with itself. I find no distinct pronouncement on the special topics of modern Realism, though a decided stand, which I welcome, is taken against irrationalism.

In considering the probable future of the human world, a favourable prospect of which is necessary, I think, to his doctrine, Prof. Hobhouse is naturally led to a criticism of such arguments as those drawn from the dissipation of energy, which point in another direction. He is probably playing with us in some extreme suggestions as to the possibility of human control over external nature. Yet they illustrate a necessity of his contention, and remind one a little of Fourier. Might we not, he asks, succeed in controlling the movements of this planet, or in migrating, at our utmost need, to another? Even to glance in this direction is perhaps to pay too highly for our attachment to the interests of a single race. It is the Positivist strain in Prof. Hobhouse. But we shall see that Humanity is not his last word.

We must now turn to the abstract argument contained mainly in the last three chapters of Book ii., on which there falls the principal emphasis of the work, considered as a philosophical inquiry. If I have rightly judged his attitude, Prof. Hobhouse would accept this estimate of its importance.

I will try to state it, without interruption by criticism, as focussing the author's essential contention; and will then make a note of the one or two difficulties which occur to me.

The real world is now in discord, but will one day be in a harmony, which must then persist. This applies both to man, along with his earth, and to ultimate reality, the structure of which is analogous to that of finite mind and its environment.

The ground of this doctrine is that reality includes two principles, the one mechanical, the other purposive. A purpose is a cause conditioned in its operation by its own tendency to a result; *i.e.*, it, the purpose or purposive cause, occurs when and where it occurs, not because of itself, but because of its result. The actuality of such causes the author considers himself to have demonstrated in his account of biological evolution. Now the purposive principle, identified on the whole with mind,[1] which is, however, not to be hypostasised as against body, gradually absorbs and re-moulds into itself the mechanical side of things, which in the beginning was the external and obstructive condition of purpose, discordant with it, though not disorderly in the sense of lacking determinate configuration. The purposive mind, as it gradually becomes aware of the mechanical conditions which operate at first behind its back, acquires power to control them. So that finally it comes to be all in all, and its development to be entirely in its own hands. The world ceases to be a mechanical configuration, and becomes a har-

[1] Whether there is something psychical involved in all organic determination of the existence of causes by their results is, I think, left open. But the author leans to such a view.

mony of self-developing unit-processes, each supporting all and conversely. Now with certain assumptions, *viz.*, the law of universal causation ; the two forms of causation, one mechanical from antecedents, the other teleological for the sake of result ; the principle, taken as the basis of Induction, that " variable " relations can only be explained by reduction to " as such " relations ; and the very important proposition that harmony does not at present exist (and therefore, according to the argument, can never have existed) —with these assumptions the author undertakes, as I understand, to demonstrate the above doctrine.

The conclusion to be justified is the existence of a real order, discordant as judged by purpose, and yet bound, in a temporal future, to conform to purpose. The proof depends primarily on the principle of reducing " variable " to " as such " relations.

When the existing relations of parts and whole conform to their character as such, then there is the condition above referred to as harmony. That is to say, every part necessitates and sustains the whole and every other part in their respective self-maintenances, which may be self-developments.[1] Such a harmony is indestructible. But in variable relations—the AB's and AD's which we constantly experience—we find collocations of terms not corresponding to any set of conditions co-existent and convertible with them, and therefore not, as given, reducible to " as such " relations. It is the same thing if you look at their antecedents. These are no more self-explaining than the collocations themselves, and you could only reduce the latter to " as such " relations if you could trace them back to a set of factors whose combination is due to their intrinsic character.

Now when the required reduction cannot be made by help of co-existent terms, it only remains to make it either by looking back to the past or by looking forward to the future. But the past can afford no scheme of intrinsic harmony. For it is laid down that there *is* no harmony, and therefore there has never been one. It follows that the existing state of discord is only explicable by dependence on the future. It is what it is, not as *per se* harmonious, but as the material out of which a future harmony is to be made.

Thus in the universe, and in our proximate world alike, you have not a harmonious reality, but a real *order* (*i.e.*, something determinate), *dependent on* a future harmonious reality. The dependence consists in the relation that all the existent real, including the mechanical aspect of things, is necessary to the future production of the harmony which will absorb it. The variable collocations which we experience are in this way and no other reducible to relations determined by the real nature of things. The former occur, when and where they occur, not for their own sake, but for the sake of that harmonious expression of intrinsic relations into which they will one day be moulded. I do not know whether the affinity

[1] So that harmony does not, like Spencer's equilibrium, imply death.

of this doctrine to some forms of orthodoxy has been observed by the author.

Ultimate reality, as I said above, is analogous in its structure to our world. There is a central mind, assumed as correlative to the larger purposes of the universe, and related to the mechanical order in general as a conditioned purpose, as is the human mind in its degree. This mind, therefore, is not an absolute, nor the whole reality. It is the author's leading conviction that if the whole were spiritual, nothing would be spiritual.

I gather, then, that even in ultimate reality there must be actual temporal progress *ad infinitum*. There is a sense in which Time is not in Reality, but Reality is in Time, but I can hardly suppose this to mean that the purposive realisation completes itself and ceases to grow (see p. 351).

I will mention one or two difficulties which occur to me:—

(1) The mechanical and purposive principles end up (I mean in the argument) more at one, I think, than they began. If they were *bonâ fide* antagonistic, must there not be a dualism, which the author strongly repudiates, and must not the final triumph be uncertain? Is not the mechanical principle rather a contribution to the purpose than a condition external to it? Is not, after all, the whole of reality spiritual?

(2) The exclusive importance attached to the future is difficult to me; both in the biological and in the abstract arguments. It is well, no doubt, for a tadpole, being what he is, to develop into a frog. But the end is relative surely to the beginning, and even as a tadpole he has an independent right to be, and the future "end" is for his sake and determined by him, no less than he is for its sake and determined by it. So with the child and the man. Has the end any prerogative of value against the beginning? and is not each alike for the sake of, and determined by, the other?

And so as to the present being inexplicable except by the future. *No* present, I presume, can be explained without remainder out of coexistents; so that, to its understanding, both past and future are essential. But is not this true of *every* present; and, if so, must not all future presents equally appear inharmonious if considered apart from the whole which extends beyond them? Is it not the whole which explains every appearance, rather than the future the present?

(3) The relation of finite or human mind to reality perplexes me. Not ceasing to be finite, it remains on one side a part of nature, and can never be complete in its own right. And more, must it not always depend on nature for the stimuli of its advance? and if it could in truth gather all conditions within it, would not its progression, far from being self-directed, lack all occasion and aim? Deeper and subtler responses from nature and from itself—for itself, at anyrate, as containing the potency of all reality, it can never exhaust nor control—are surely what both the theory and

the experience of evolution lead us to expect for the developing mind.[1] The purposes of the world, as Prof. Hobhouse reminds us, transcend those known to the human mind; though the central mind, their correlative, is for him also finite.

(4) The author meant, I imagine, to supply a direct and positive principle of evil, in the mechanical system which obstructs the purposive mind. "Idealist" explanations—those, I presume, which depend on finiteness—he wholly repudiates. But we have seen how the positive obstructions to good tend after all to become conditions which good alone can explain, and, moreover, which enter into its substance. Yet, these as the ethical ideal demands, are actually to be overcome and absorbed by the triumph of a mind which still remains part of nature. Some of us are sure to feel that such a principle of evil is too external and transitory, and is therefore too easily, and therefore again too imperfectly, exorcised. The ethical idea, claiming as it does the triumph of the finite as finite, seems to forbid any penetration into the essence of religion.

These difficulties are rooted perhaps in the prejudices of a different way of thinking. Certainly I have learned much from the book with its comprehensive survey of fact, and I also understand that its indomitable demand for actual terrestrial progress—its Positivist strain—is something which requires from philosophy the fullest sympathy and most careful interpretation.

BERNARD BOSANQUET.

The Mechanistic Conception of Life. Biological Essays. By JACQUES LOEB, M.D., Ph.D., Sc.D. University of Chicago Press. 1912.

PROF. LOEB is well known for researches of great scientific value carried out with admirable ingenuity, patience and care. In a recent address (1911) on the Mechanistic Conception of Life, which gives a covering title to this collection of biological essays, he has summarised the results of his investigations and set forth the doctrine he founds thereon. "It is not possible," he admits, "to prove in a short address that all life phenomena will yield to a physico-chemical analysis." But the establishment of this conception of life is the goal of his endeavour. Much, no doubt, turns on the question: What exactly is meant by saying that all life phenomena will yield to physico-chemical analysis? There is, however, a prior question: What is included under the head of life phenenomena? Are mental processes to be included? Unques-

[1] The author's own instance, the fall of the birth rate, is a good case of a response which may take us utterly by surprise. We may expect reactions that cut deeper, as we get deeper into reality.

tionably they are. "The contents of life," we are told—or, one may suppose, more accurately *among* the contents of life—"are wishes and hopes, efforts and struggles, and unfortunately also disappointments and suffering." It is clear, therefore, that life includes conscious experience. Is then this inner life amenable to physico-chemical analysis? "In spite of the gulf which separates us to-day from such an aim, I believe," says Prof. Loeb, "that it is attainable." Tropisms furnish the clue. "Our wishes and hopes, disappointments and sufferings have their source in instincts which are comparable to the light instinct of heliotropic animals. The need of and the struggle for food, the sexual instinct with its poetry and chain of consequences, the maternal instincts with the felicity and the suffering caused by them, the instinct of workmanship, and some other instincts are the roots from which our inner life develops. For some of these the chemical basis is at least sufficiently indicated to arouse the hope that their analysis from the mechanistic point of view is only a question of time. . . . Not only is the mechanistic conception of life compatible with ethics: it seems the only conception of life which can lead to an understanding of the source of ethics."

Prof. Loeb himself admits that we are still far from the complete attainment of this ideal of physico-chemical explanation. Let us glance at an example of its attainment in such measure as to afford a basis for his confident hope. Such an example is found in the compulsory movements of aphids under the influence of light. Two factors govern the progressive movements of the insects under these conditions; one is the symmetrical structure of the insect, and the second is the photo-chemical action of light. Given an organism with bilaterally symmetrical structure and chemical constitution, differential incidence of light will give rise to differential metabolism in the photo-chemical substances on the two sides—say in the eyes. The physico-chemical changes thus initiated influence differentially the muscle-systems on each side, through connecting channels in the central nervous system. Consequently the development of energy in the symmetrical muscle-systems of the two sides of the body is unequal. The motor mechanism on the one side being thus more powerfully energised than that on the other side brings the aphid round until the photo-chemical action of the light on the two eyes is no longer different. The metabolism on each side of the insect's body is the same in amount and symmetrically distributed, the motor mechanisms of the two sides are equally and similarly energised, and the aphid goes ahead lightwards. Such in brief is the scheme of physico-chemical explanation. "In this instance," says Prof. Loeb, "the light is the 'will' of the animal which determines the direction of its movement." One would have supposed that the physico-chemical constitution of the organism was, on this scheme, the basis of the "will," the incidence of light being a condition of these mechanical

changes at the time of response, "which the metaphysician would classify under the term of animal will". But that is not the way in which Prof. Loeb puts it.

Now, first, let us gladly acknowledge, and that in no niggardly spirit, the great value of the facts which Prof. Loeb has observed in the course of his varied studies in the field of tropisms. Such facts are the stepping-stones of scientific progress and their discoverer deserves and should receive our grateful thanks. Secondly, let us freely admit, not only that the effects of light on the retinal receptors, or on less differentiated structures, involve physico-chemical processes, but also, as a justifiable working hypothesis, that all organic changes, say in nerve or muscle, are correlated with metabolic processes and redistribution of energy. The essential question, then, is, not whether physico-chemical changes are present presumably throughout the whole range of biological phenomena, but whether, in the existing state of scientific knowledge, they, and they alone, suffice for the interpretation of all the facts. We should endeavour, in dealing with a scientific work, to discuss the problems it raises on strictly scientific lines. Now presumably, in the aphid, the flexions and extensions which conspire in the movements of the limbs involve integrative action of no little complexity. Is this entirely explicable without remainder on the principles of chemistry and physics? Some of us, who try to interpret phenomena in accordance with the best traditions of scientific method, think not. There seem to be certain specific changes in the living organism which we feel bound to distinguish as specifically organic in their nature. And among these is the integrative action of the nervous system which we conceive to be a factor in the "light instinct" of aphids. No doubt Prof. Loeb will remind us that in the heliotropism of protozoa and of plants nerve-centre integration is excluded; he will remind us that recent researches on hormones have shown that there are modes of integration other than nervous; he will press his view that nerve-centre integration is at bottom nothing more than differential conduction of physico-chemical changes; he will remind us that a condition of the exact nature of muscular contraction is the chemical constitution of the fluid in which the muscle-fibres are bathed. But if all this be borne in mind, can we honestly say that the complex integration involved in the walking of an aphid lightwards—all that intervenes between differential stimulation and differential response in co-ordinated motor activity—is adequately explained, that is to say, explained without remainder, on the generally accepted principles of chemistry and physics? In the present state of knowledge, whatever the future may hold in store, do we not need a biological category of natural phenomena as well as a physico-chemical category, fully as we may be prepared to believe that all biological processes are correlated with metabolic changes?

And apart from the integration involved in the motor activity of the aphid, how comes that symmetrical structure on which heliotropism in the organism depends? Granted that every stage in the development of the ovum and in the formation of the tissues of the insect is strictly correlated with physico-chemical changes, do the known laws of chemistry and physics enable us fully to interpret all the phenomena of development? It may be said: If a physico-chemical basis can be proved, what more is required for scientific explanation? Surely a good deal more. It has to be shown that there is no other mode of relatedness among the constituent parts of the organism than a physico-chemical relatedness, among its molecules and atoms. Some of us who try to face the facts in what we regard as a scientific spirit, feel bound in the light of these facts to place the phenomena of development in the category of natural processes which, to-day at any rate, require the distinctive label "biological". Mendelian heredity may well, we think, involve correlated physical and chemical changes; but to say that the known laws of chemistry and physics suffice to explain all the observed facts of heredity and development seems to us to go a good deal further than is justifiable in the present state of things. On what we believe therefore to be the firm basis of scientific sanity we distinguish certain processes as involving a category of biological relatedness, without for one moment presuming to deny that there are correlated physico-chemical changes.

Is it possible, Prof. Loeb may exclaim, that one who writes thus can have read, even with the superficial glance of a reviewer, the evidence adduced in favour of artificial parthenogenesis? Well! What are the facts? Normally a spermatozoon enters a matured ovum. Apart from being the bearer of hereditary unit characters (*ex hypothesi* physico-chemically determined) Prof. Loeb believes that it plays a double chemical role in virtue of its being also the bearer of two specific physico-chemical substances. By means of the one it induces the formation of a fertilisation membrane through the cytolysis of the cortical layer of the ovum; by means of the other it starts the process of cell-division in the residual portion of the ovum, from which the fertilisation membrane has been separated off. Now both these conditioning chemical effects can be produced by appropriate laboratory substitutes for the substances the presence of which in the living spermatazoon is a matter of quite probable inference. Hence artificial parthenogenesis can be carried out in the laboratory. Here again the observed facts are of great interest and value. But here again the question arises: Granted that chemically induced cytolysis, giving rise to the fertilisation membrane, is a necessary condition to development; granted that further physico-chemical changes must be initiated in the ovum before normal cell-division proceeds on its course; granted further that developmental cell-division and cell-differentiation are throughout their whole course and at every stage cor-

related with metabolic changes and redistributions of energy; does this prove that the mode of relatedness which we term physico-chemical is the only mode of relatedness that is open to scientific investigation in biology, and that it suffices for the interpretation of all the observed facts? Are those who believe that, in the present state of knowledge, science must recognise a further mode of specific relatedness, termed organic or biological, to be regarded as untrue to the principles of scientific thought? It seems to some of us preposterous to assert that physico-chemical relatedness (even supposing it to be ubiquitous) is the one and only mode of relatedness which is open to scientific investigation in the study of organic phenomena. Prof. Loeb seems to say in effect: If there is this physico-chemical relatedness then there cannot also be that biological mode of relatedness; and he apparently supposes that those who are unable to accept his full doctrine must say in their turn: If there is this biological relatedness there cannot also be at the same time that physico-chemical relatedness. But why not both? The modes of relatedness in this world are pretty various. Why attempt to reduce all modes to one?

But even if it be granted that the victorious advance of the mechanistic conception of life, *sensu stricto*, may eventually force us to admit that mitosis, embryological development, the integrative action of the nervous system, and the phenomena grouped under the term heredity, are not only correlated with physico-chemical processes, but are adequately covered by the laws and formulas of chemistry and physics—even if this be granted, is there any likelihood, so far as the present scientific outlook enables us to form an unprejudiced opinion, that the specific mode of relatedness we call cognitive (stripped, if we can so strip it, of all metaphysical implications) will also be adequately covered by such laws and formulas? When Prof. Loeb bids us "bear in mind that 'ideas' can act, much as acids do for the heliotropism of certain animals, namely, to increase the sensitiveness to certain stimuli, and thus can lead to tropism-like movements and actions directed towards a goal"—can we seriously regard such a statement as on the same scientific plane as his statements with respect to the chemical conditions under which a fertilisation membrane is formed? In the interest of the latter statements we trust not. What does the former statement mean? Does it mean that in a given physico-chemical configuration an "idea" may be substituted for an acid, in much the same way as a solution containing butyric acid may be substituted for the chemical substance in a living spermatozoon? That perhaps is too crude an interpretation of his meaning. Indeed elsewhere Prof. Loeb speaks of an "idea" as "a process which can cause chemical changes in the body". But a process which can cause chemical changes must, on his view, be itself a physico-chemical process. In either case there is an identification of the mental and the physico-chemical. As a matter of sober

scientific interpretation (and with such an interpretation only we are here and now concerned) can we go further than the working hypothesis that the "idea," as such, is *correlated with* certain metabolic changes in the cortex of the brain or elsewhere? Now granted that the enjoyment of a full rich red is correlated with some four hundred billion vibrations per second in a particular part of a spectrum thrown upon a screen, in what scientific sense can we identify the one with the other? We shall perhaps be told that the identification is reached through the principle of causation; that the enjoyment of red is caused by certain cortical processes which, through a series of intervening causal links, are caused by ætherial vibrations; and that, as every one knows, the effect must be identical with its cause—or at least of identical nature with its cause. If so we confidently reply that what every one is supposed to know is not a scientific truth but a philosophical assumption of very questionable validity. If, as we believe, this assumption is false, the foundations of a mechanistic conception of life are undermined. For throughout the whole treatment there underlies the tacit assumption that, if the so-called causes are physico-chemical, all the effects must be of like nature.

C. Lloyd Morgan.

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The Value and Destiny of the Individual. The Gifford Lectures for 1912, delivered in Edinburgh University by B. Bosanquet, LL.D., D.C.L., Fellow of the British Academy.

It is not often that one has to review a book in which as here we have the concentration of the ideas of the writer's life-time upon the greatest problems. In this case, while it confers a privilege it also creates a difficulty, seeing that the philosophical grounds for the conclusions arrived at are, in the main, to be sought for in previous writings and more particularly in the previous volume recently reviewed in Mind.[1] Under these circumstances, the occasion might seem more suited for some general estimate of the writer's philosophy as a whole, or, if this is out of the question in the space allotted, for a short *resumé* of the conclusions themselves and an acknowledgment of the gratitude that the whole philosophic world must feel for so frank and fearless a statement of them. What I have attemped is, I fear, neither of these but a compromise between them.

Taking the present volume along with its predecessor, we may say at once that together they mark a contribution to English Idealism that takes its rank along with Green's *Prolegomena* and Bradley's *Appearance and Reality.* What gives the argument they contain

[1] *The Principle of Individuality and Value*, *Mind* N.S. 83.

its own particular significance is that it is developed in view of the criticisms that have been recently urged from the two opposite points of voluntaryism or 'personal idealism' and realism against the leading doctrines of these classics. It would not be true to say that there is any new departure. What is true is that under the pressure of that criticism idealism has here been forced to come to a clearer understanding as to what it really means on several fundamental points. While, therefore, these books contain a challenge to the opponent of idealism which he will find it difficult to meet on the old ground, they offer more sympathetic readers an opportunity of noting what may be called the growing points of idealist doctrine. I may say at once that, to my own mind, the question is not so much whether the author is right in insisting upon these points as whether he has made the fullest use of the premises as he has re-stated them.

There can be no doubt as to where we are to look for the central point, though the author's modesty, perhaps too a pious fear of "laying hands on his father Parmenides," has somewhat obscured it. The main difficulty both with supporters and opponents for the last quarter of a century has been caused by Mr. Bradley's use of the principle of contradiction. I do not think that Mr. Bradley is wholly responsible for the confusion, but there are undoubtedly passages in his writings where the distinction (fundamental in Hegel) between contradiction and negation has been overlooked, with the consequence that the reality of the finite has been endangered and self-consciousness itself has tended to be represented as a defect instead of as the key to the universe. The aim of chapter vi. of the *Principle of Individuality and Value* was to make this crucial distinction clear[1] The argument is probably familiar to the reader, but its significance seems to have been overlooked by some reviewers of the book. To have seen the importance of the distinction, and to have burnt it into the page, seems to me to mark a definite achievement in recent philosophy. Two things at once follow: first, while the finite can only have its being returned to it in so far as it transcends itself, this transcendence is itself a part of the infinite, and ministers to its perfection; and secondly, whatever we are to say as to the character of the world as a whole, self-consciousness is not to be set aside as a defect in virtue of the element of difference or negation, which is an essential part of it. The main interest in the volume before us is the application which the writer makes of these conclusions in the Third and final Part to define the nature of God, the grounds of individual survival, and the value of civilisation, which he calls, somewhat enigmatically, the "negative condition" of the true life of the soul. But there are certain preliminary points in the first two Parts which are of peculiar interest in face of current controversy and call for notice.

[1] See p. 247 ff.

Treating, in the first Part, of "the moulding of souls," the writer is prepared to assert in the strength of his idealism the paradox of the all-sufficingness of natural selection. In his hands, this means that the principle that is operative throughout is not a fixed environment conceived (after the manner of naturalism) as first precipitating and then negatively selecting organic centres, but the positive principle of totality or individuality manifesting itself in a series of forms which have the power of representing it in a greater or less degree. All this has been familiar to philosophy since Hegel conceived of the history of the world as the process by which the absolute comes to a consciousness of itself. But it is just this interpretation that recent criticism has challenged on the ground that it reduces individual centres to a mere reproduction of the universal consciousness and excludes initiation. It is vain, so runs the criticism, to refer to the mind's "constitutive" function. In reality the individual mind constitutes nothing, but merely reproduces a given constitution. To meet this difficulty voluntaryism appeals to the will as a principle of initiation. But this is just what we want to understand. To initiate is to set something going which reality is prepared to accept, something that falls (we might say) into a place prepared for it, so that once it is there it has the air of being 'inevitable,' and this is just what requires explanation. The value of the section in which all this is dealt with, with its interesting note of autobiography, consists in the reinterpretation of the familiar idealist phrase, "the unity of thought and reality". There is always "more *in* the mind than there is *before* it," and this more is the principle of wholeness which its present contents represent but fail completely to embody. So far from lacking initiative force, this principle is the very spring of endeavour. Apart from it, what assurance could we have anywhere that we had the clue to the world of experience? The writer illustrates from the relation of circumstance to character. From the vantage ground of a fresh interpretation of metaphysical theory he presses the point (familiar to social reformers from his more popular statements of it elsewhere) that the social movement which idealism has largely guided can only be kept true to its promise by rooting itself anew in the conviction that "on the whole and in ultimate doctrine finite facts are powerless against thought and character". This doctrine, which bears a superficial resemblance to the pragmatist doctrine of a world that can be indefinitely moulded to desire, is, as the context shows, the precise opposite. Yet to the reader it is likely to remain a hard saying unless he keeps before his mind the extended meaning which the writer gives to mind and character.

As the first Part is concerned with the true nature and basis of freedom, the second, under the title of the "Hazards and Hardships of Finite Selfhood," has for its underlying aim to establish the grounds of a rational optimism. There is no department in

which recent neo-Kantism has lost its way more hopelessly than in its treatment of pain and evil. It is here we meet with what has come to be known (not without protest) as the theory of a limited God, which more clear-sighted writers, like Dr. Ward, see to mean either a number of Gods or no God at all, without, however, being able to offer a satisfactory way out of the difficulty. Idealism itself has not been without reproach in continuing to treat pain as a minus quantity which requires to be cancelled in the absolute. The first step in the exodus is again to realise what is involved in a true theory of the finite. If finitude is necessary to the perfection of the whole, so also must be the pain which is the sign of the obstruction and contradiction involved in finitude. Again we have a hard saying on which criticism is likely to fix.[1] The writer is able to fortify himself, in the position he here takes, by a brilliant appeal to the ordinary religious consciousness and more particularly to the Religion of the Cross. What we are justified by a sane idealism in asserting is not that pain must cease in the absolute, but *first* that it will be changed as the sense of inpenetrability gives way to that of opportunity, and *secondly* that just because pain has a definite place it can never dominate throughout, but must remain a subordinate factor in a triumphant whole.

In the corresponding treatment of evil, I have only space to refer to the series of incisive distinctions on page 197 ff. which runs a line of light through a subject often left obscure even by ethical writers of idealist persuasion, and to the identification of the limits of ordinary theistic philosophy with those of ordinary individualism. As individualism sets us on a vain hunt for a principle of justice in a world of "claim and counterclaim" composed of individuals conceived of in Hegel's phrase as "at arm's length" from each other, so theism searches for a point of view that will 'justify' present unhappiness or imperfect achievement by an endowment of the individual in his own right with future opportunities. The only escape from the latent pessimism of this position is to realise the fallacy or, at any rate, the inadequacy of the whole point of view. The appeal to justice we might say, like divorce, which is a part of it, is permitted because of the hardness of the social heart, but "in the beginning (in principle) it was not so" It is not, however, clear how far the writer would carry the parallel between the legal aspect of society and of religion, nor what the precise relation is of the Theism which he rejects to the god-consciousness which he allows. What, for instance, is the place of the *fear* of the Lord so conspicuous in such types of the religious consciousness as Newman's?

[1] The difficulty which I have no desire to minimise is, I suppose, that granting the distinction between the negative and the contradictory yet is not that which makes the finite a negation just the element of contradiction that it contains?

Leaving this for the moment, it is the last Part, on the "Stability and Security of Finite Selfhood" that the interest of the reader of this volume is likely to centre. Dr. Ward has said[1] that the relation between God and the Absolute is the chief problem of the philosophy of the twentieth century. We have here the first attempt at a systematic answer. It starts from Mr. Bradley's treatment with which it so far agrees that religious consciousness is described as essentially practical. Religion differs from morality not in affirming the reality of the good (all concrete morality does this) but in affirming that it is the only real. Conflict, indeed, remains, but the identification of the individual with the universal will brings assurance of victory. Imaginative representations of this relation between the soul and the universe need correction—this theists have admitted—but the truth remains not as an assertion of the 'existence'[2] of God but as a recognition of the place of the experience here defined in the process whereby the soul finds itself. We could have wished that the relation between the religious consciousness and the absolute consciousness had been worked out more fully here. For the details we have to go back to Lecture X. of the *Principle* and forward to the condensed statement on page 310 of the present volume. But the point, I think, is clear: the highest experience is to be sought not in the God-consciousness nor again in an unrealisable sense of undifferentiated unity analogous to bare feeling, but in "real awareness of an inclusive world" whose greatness and splendour dominate over its goodness. Here is a critical point, and again we should have welcomed greater detail. Does the sense of greatness enter as a disturbance to the peace and security of religion? This, clearly, is not the writer's meaning. The sense of greatness, on the contrary, is needed, he says, "to widen and sweeten religious consciousness, and forbid its components to harden into mere antagonistic forces," but the critic will press both for principle and detail. I believe that the link is supplied in what has been said in the chapter on "Soul-making". The world truly is a great and splendid, if you will, a terrible place; but to see its splendours and its terrors alike subordinated to the moulding of souls is to see them as factors in a Love which is its greatest splendour. If it be replied that such vision is what we mean or ought to mean by religion, I see no reason why this claim should be disputed. At the level thus reached, it would, I suppose, be a matter of words.

The second "wave" of this Part is the question of the destiny of the Finite Self. Idealism has, in general, fought shy of the problem of individual survival, partly because of its inherent diffi-

[1] *Naturalism and Agnosticism*, vol. ii. fin.

[2] No reader is likely to quarrel with the uncompromisingness of Dr. Bosanquet's rejections, but there seems no reason why those to whom existence stands as the type of all reality instead of the least of its attributes should not be made welcome to it here.

culty, partly because it has felt that it concerns us in a different way from the reality of religion, to which it must always be secondary. The writer faces it with a full sense of the responsibility to test his conclusions by their bearing upon it. Continuity and permanence are a fundamental need of human nature. How are they to be interpreted? It is clear at once that mere continuance of existence in its present form will not do. This is again an imaginative picture—"an idea," we might say, "in the form of history". Mere continuance would leave us as far from satisfaction as ever. If we were in the heaven we seek, we should not be in the heaven we want. It was an application of this principle when Bradley appealed to the standard of the consistency of our affections. But we are again left with the question of what remains when the inconsistency has been removed. Dr. Bosanquet is pledged to the view that it must be individuality, and, further, that it is the true individuality of content and experience and not the sham individuality of private feeling. The problem is, then, twofold: first to show how, as a matter of fact, the 'exclusive self' of time and place is constantly being transcended, and secondly (a far more difficult task) to show what place we must assign to it in the ultimate result. The section shows the author's resourcefulness at its best, but it would be idle to say that the two questions are treated with equal conclusiveness. We have no difficulty in following the argument that the birth of the body has little or no relation to the birth of the soul, the kindred of the flesh to the kindred of the spirit, or that a personality ma y be sublimated, as in the case of Dante's Beatrice, into a timeless ideal. But the problem returns of the psychical root, the 'formal identity,' as the writer calls it, which, however differently from current philosophy we may conceive of it, is still admitted to be contained in the substantial self. There are, apparently, two suggestions: One that there need be no limit to the soul's power of constituting out of natural conditions a new centre of experience (so, at any rate, I read p. 259); another that no such reconstitution is necessary but only a rearrangement of the qualities which have emerged as the meaning of the natural conditions (so I understand p. 283). I cannot doubt that the second (if it is really different from the first) is the writer's real meaning, particularly when we take the first in connexion with the passage (on p. 267) where he seems to admit the validity of Aristotle's objection to a series of bodies. I believe that this is right; I would only venture to suggest that the difficulty would have been lightened if the writer had been ready to apply here the admission, which he makes on page 4 as to his treatment of externality in general in *The Principle*, to vital feeling which is the image or psychical equivalent of the body, and had pressed the point that so far as it is an "identity" it is "always for mind and not self-existent". Following the same hint, one might ask whether the order of the two propositions

(on p. 287) in which he sums up his conclusion should not be altered in favour of a positive conclusion as to the survival of the concrete self. In that case the self that survives must be at least a person. But it is just here that the reticence of the older writers finds its justification. The essential thing in the desire for the permanence of personality is the desire for union with the eternal, and any argument that seems to give countenance to the substitution of temporal continuance for this is likely to open the way to misunderstanding on a fundamental point.

The last wave ("The Gates of the Future") gives plainer sailing, albeit it has recently been whipped into something like fury by the pluralist demand for a universe changeable as a whole through the achievement of its members. The problem is to reconcile belief in the value of human effort with belief in perfection. What is at once clear is that any theory starting from a pluralism which excludes the possibility of harmony and of contributing through it to the wealth of reality so far from inspiring effort saps it at the root. "Open gates" may be claimed at too dear a price. But may not absolutism be in a like perplexity from the opposite side if finite effort is simply opposed to perfection as appearance to reality? Perhaps, but this is not now the alternative before us. It is true, in Dr. Bosanquet's view, that the whole can never be realised in time or in the finite being as such. But this does not make his effort to realise it worthless, seeing that the effort is no illusion but a real element in the Whole. On this ground it is possible to accept perfection as real, while admitting that the finite cannot attain it in its own right, and, on the other hand, to accept the actual attainment as real without prejudice to perfection. While, then, a will whose 'ought' or 'is to be' is without assured basis in the real world or (what comes to the same thing) a will which has no real unity of content with other wills, must lack both inspiration and guidance, "There can be no fear that a self identified in will and conviction with the transcendent perfection will be lacking either in the spirit or in the detailed occasions for fuller expression of that which inspires it in the actual modification of its world".

There remains the particular form of the hope of the future. We are pledged to the modification of our world in the direction of increase in the wealth and harmony of our finite life. However peripheral, even "negative" this condition may be, it can never be mere illusion. Nevertheless, taken alone it may serve only to deepen the unhappy consciousness by deepening the sense of self-alienation or again, "give only a false sense of security: the self-satisfaction which is the portal where hope vanishes". To minister to real satisfaction it must be accompanied by an increased insight into values and a conviction of the worthlessness of the finite *per se*. The writer is aware of the pitfalls here, but he risks them in order to press his last point that the spread of this deeper self-recognition

is the one thing needful at the present time, and "the main thing that the future has to bring us"

If we missed a harmonising note in the more formal treatment of the absolute in an earlier chapter, there is no mistaking it here. Love is the typical self-transcendence, "the best, in a sense, the only thing in the world". Common sense recognises this, religion proclaims it. What we require to be reminded of is that it is not to be had for nothing. This Dr. Bosanquet is content to give as "the essence of his argument".

I have tried to bring out in this review the points at which there seems to me to be an advance on previous statements of idealist doctrine on human value and destiny, but no bare mention of these can give any idea of the power and the freshness of the illustrations, particularly in the notes with which the fullness of the author's mind brims over, far less of the impressiveness of the book as a whole.

I have claimed that the line of thought here completed represents a notable contribution to contemporary philosophy. I have not claimed that it leaves no difficulties—even for the most sympathetic reader. I believe, however, that the difficulties are not those that pluralism has urged nor such as are to be met by going back on the main principle of modern idealism, but rather by following further the clue that Prof. Bosanquet's interpretation of it puts into our hands.

J. H. MUIRHEAD.

Essai sur les Fondements de nos Connaissances et sur les Caractères de la Critique Philosophique. Par A. COURNOT. Published by Hachette. Pp. vii, 614.

THE present work is a reprint of a book first published in 1851. It was well worth republishing; for it is not only able in itself but extraordinarily modern in its way of dealing with the philosophical questions that arise on the boundaries of natural and mathematical science. The book consists of one main contention and its application to a great number of different questions. The contention is that beside necessary reasoning as in logic and pure mathematics we must take account of philosophical probability. This is not indeed measurable accurately; but we can note degrees in it, and often it is so great that it produces and ought to produce complete conviction. This philosophical probability is as much as we can expect to get in metaphysics, and it must be our criterion in judging what is objective and what depends on the peculiarities of personal or human nature in the objects that we perceive or think about. To criticise with this criterion in view is the highest function of reason.

But what exactly is meant by philosophical probability? It is closely connected with order, a notion to which Cournot does not indeed attempt to give the rigorous definiteness characteristic of modern philosophers of mathematics, but whose importance he clearly recognises. In nearly all his applications of probability in criticism the line of argument is: This order which we detect might *a priori* be due either to chance or an objective order; but it is almost indefinitely unlikely that the former should be the case. We can easily suppose that a real orderliness shall give rise to the appearance of disorder, but it is almost incredible (though not *logically* impossible) that disorder should constantly present an orderly appearance. By the production of anything 'by chance' Cournot means that the event in question consists of contemporary terms in two or more independent causal series. Suppose then that in any set of experienced objects we want to find what depends on the peculiarities of the experient and what is independent of him, and we discover that the maximum of orderliness is introduced by supposing that a certain part x is objective (in the sense of independent of the experient) and that it obeys certain laws; then it is most unlikely that the regularity should really be due to our peculiarities faced by a chaotic world. So we ought to accept that particular apportionment between objection and subjection that introduces the greatest regularity.

Cournot distinguishes appearances, phenomena, and things-in-themselves. And he constantly quotes the distinction between real and apparent motions as an example of advance from knowledge of one to that of the others. Thus the geocentic theory describes appearances, the heliocentric theory gives a true account of phenomena, whilst it does not do so of things in themselves because we do not know if or how the fixed stars are moving. Cournot does not make his distinctions very clear, but I think that his point is that appearances only exist when perceived, and may differ from anything that exists independently of an observer, whilst knowledge of phenomena is nothing but partial (and, so far, correct) knowledge about things in themselves. On this view phenomena and things-in-themselves would be identical as entities, and there is no reason why phenomena should be perceived by any one or why things-in-themselves should not be perceived by some one. If this is his view of the distinction his example is unfortunate, for it is just as true that relative to the earth the planets describe cycloidal curves as that relative to the sun they describe ellipses; and both pieces of information are phenomenal knowledge.

In an interesting chapter on the Senses Cournot applies his general line of argument to the commonly accepted grounds for distinguishing primary and secondary qualities. He considers the deliveries of each sense in turn, and draws a distinction between those that are and those that are not 'representative'. The conclusion is that sight pre-eminently, touch to a less extent, and

hearing to a slight one are representative. These are of course the senses that give us acquaintance with relations—spatial in the case of the first two and numerical in that of the last—and it is in respect of these relations that they give us something which is directly correlated with what exists independently of us. Whilst I agree with Cournot's conclusions I think that in his reasonings he confuses the direct objects of our sense-perception with the physical causes of the latter. Indeed he seems to think that sight *e.g.* is representative because the essential qualities and relations of what we see are correlated with the shape and size of the patch of our retina affected by light. But this surely is to found an argument for the representative character of sight on a physiological theory which already assumes that our senses are representative of spatial relations.

Cournot has a peculiar theory about mathematical reasoning. It is always *a priori*, but Kant was wrong in supposing that it is always synthetic. Algebra apparently is analytic, for any algebraic proof of a geometrical proposition is analytic. Moreover, it is a great advantage of mathematics that all its propositions can be verified experimentally, in spite of the fact that the proofs do not depend on experiment. The same is true of formal logic. I confess I do not see what is the advantage of the mere possibility of experimental illustration: for in these cases it is admittedly nothing more.

In the matter of universals and our knowledge of them Cournot adopts a balanced position. Some are merely the results of our subjective activities directed to some special object; others are actually present in the nature of things. With regard to the latter Cournot is almost as realistic as Meinong, though he does not touch on the question of non-actual Objectives. Surely with regard to the former too we find and do not make. In a very artificial classification the universals under consideration do not indeed stand in relations that are important in the existent world (as *e.g.* do the universals ruminance and cloven-footedness), but still they are there independent of us, and it is only our selection of these rather than of others that is subjective.

Cournot has an interesting discussion on the merits and defects of language and sybolism. Any symbolism necessarily consists of a finite number of discontinuous objects. Now, some things in the world are discontinuous whilst others are not. In representing the former by symbols we can often reach complete accuracy without excessive complication; in representing the latter, exact accuracy is infinitely improbable. Hence such a scheme as Leibniz's Philosophical Language must fail. The only continua that can be accurately represented by symbols are magnitudes, because our notation enables us to approximate as nearly as we choose, and to know the limits within which our error lies. Another inevitable source of difficulty is that symbolism must be read and language

heard in an order in time, whilst what is represented is timeless or in a temporal order that bears no definite relation to that of the discourse.

An application of the general theory is made to Ethics and Æsthetics with the object of seeing what is objective in these. Cournot is a strong rationalist. He has little difficulty in disposing of sceptical objections drawn from varieties of moral judgment in different times and places. Moral discoveries are made by persons of moral genius as time goes on. From the fact that these new obligations endure Cournot draws an argument for the objectivity of morality, and its difference from a mere set of rules, for securing what will best satisfy human nature in this world. If morality were only such a set of rules we might expect that all men would gradually approximate to them, and that new obligations felt by individuals would gradually fade away as being aberrations due to their personal eccentricity. This argument is surely inconclusive. In the science of what makes for human happiness there might surely be discoveries to be made, and if the new obligations were just newly discovered laws in this science we might expect them to endure as well as if they are laws of another and higher science.

Cournot devotes two long and rather needless chapters to Jurisprudence, for which he not unreasonably apologises. He has rather a difficult chapter on the relations of history, science, and philosophy. Philosophy can never become a science, and it is important to remember this when people say that philosophy is useless because the same old questions constantly recur. But every science has its philosophic part. It is not at all easy to see the precise distinction that Cournot could draw between the hypothetical part of any science and its philosophy; and it would seem that he forgets that the laws of science are themselves only probable, and are discovered in exactly the same way as he himself philosophises. Perhaps it is fair to say that the philosophy of a science is those unifying and co-ordinating hypotheses which cannot be experimentally verified, but are introduced as ideals out of respect for the order and connexion that reason looks for in the world.

Cournot criticises introspective psychology rather severely on the usual grounds, and concludes by a review of Plato, Aristotle, Descartes, Leibniz and Kant. He is most favourable to the last two; but he blames them all for expecting logical demonstrations where philosophic probability alone is possible.

C. D. Broad.

VI.—NEW BOOKS.

The Problem of Evil in Plotinus. By B. A. E. Fuller. Cambridge: University Press, 1912. Pp. xx, 356.

The growing interest in the serious study of the great Greek metaphysicians as philosophers who "count" even for our own times is strikingly evinced by the number of recent works dealing with the thought of Plotinus. Among these recent works, Mr. Fuller's book deserves a respectable place. I do not share his confidence in the ease with which he has proved the moral and religious speculations of so great a man to be incoherent, but I am glad that any fresh work should bring Plotinus and his philosophy before the attention of our "studious youth" even if by way of "refutation". And I readily recognise that with whatever defects in exact scholarship and historical insight Mr. Fuller's statement of Plotinus' position on the ultimate issues is, in the main, clear and fair, and that thanks are especially due to him and the friends whose assistance he acknowledges for the very useful selection of texts from the *Enneads* printed at length in the notes to his book. There is a certain doubleness of aim about his argument which makes criticism difficult. It is manifest that his purpose throughout is not merely to state and examine the teaching of the founder of Neo-Platonism on its own merits, but also to use his opportunity for the purposes of a general assault on modern Monistic theories which assert the perfection of the actual Universe. The consequence of this is that a great deal of his space is taken up with an argument which can hardly be said to be relevant as against the special view of Plotinus or of Platonism generally. The argument, which assumes several different forms, but is in principle the same at bottom, is that to teach the "perfection of the Universe" or the doctrine that evil is unreal leads directly to the denial of the worth of the ethical life. The only sense in which the world is perfect is a purely naturalistic one. Everything is perfect as it is, from the point of view of the whole, as just that expression of the nature of things which it is, and no one thing is, in this sense, more perfect than any other. Christ, for example, is no more perfect in this Spinozistic sense than Judas, since each contributes his special performance to the life of the one whole. But perfection, so understood, is not moral perfection. Hence the believer in moral perfection is bound, so Mr. Fuller seems to hold, to be metaphysically a dualist. Formally, to be sure, this reasoning is not applicable to Plotinus, who, like his master Plato, holds firmly to the view that evil is ineradicable from the actual world. But, it seems to be meant, Plotinus, though he formally asserts only the "goodness," not the "perfection" of the actual, involves himself in a dilemma, partly by his agreement with Plato that evil is strictly "not-being," partly by the fact that in arguing for the thesis "the world is good," he borrows Stoic arguments which had been employed by the Stoics to prove the perfection —in the naturalistic sense—of the world. Now I am not at all clear that, on either of these grounds, Plotinus is really open to the charge of—by implication—relapsing into a merely naturalistic monism. This would be

a fair charge if, for example, the Stoic thought that "partial evil" is "universal good" were the whole or the principal part of his Theodicy. But that view, according to which evil is merely apparent, is, of course, not permissible to a Platonist. Hence it is only as a partial solution of the problem of evil, demonstrably valid for some cases, but quite inadequate in others, that Plotinus admits the justification of seeming evil by a reference to the point of view of the "whole" into his Theodicy. I think Mr. Fuller would have done his author more justice on this head if he had been more alive to the dialectical character of Plotinus's method. Like Aristotle, Plotinus does not usually give his own fullest solution of difficult problems magisterially as soon as he has raised his questions. He proceeds by way of successive "aggressions" or approximations to a solution, usually beginning with one based on previous philosophy and accepting it for the cases which it will fairly cover before he indicates where it breaks down and attempts a newer and profounder answer. This is why he can to a large extent adopt the Stoic formulæ; they do cover numerous cases, since it is genuinely the fact that much in Nature that seems evil on a narrow and contracted view will be found on a wider survey to be positively beneficial. The recurrence to the thought of the standard of the "whole" is thus justifiable as adequate in dealing with much apparent "physical evil". But it does not meet all the cases even of "physical evil," and fails completely in dealing with "moral evil". Plotinus does not, as Mr. Fuller seems to think, simply adopt one theory or another *ad arbitrium;* he works with a "first aggression" as far as it will carry him, and then proceeds methodically to look for a more exact solution, so that his real answer to the question πόθεν τὰ κακά only emerges at the end of a series of dialectical "aggressions". Nor is it true, again, that the final identification of the source of evil with "not-being" amounts to naturalism. Mr. Fuller seems, by pressing language, to credit both Plato and Plotinus with meaning to identify evil in the end with the non-actual, and urges against them that, except on the purely naturalistic view according to which everything actual is perfect as it stands, and only seems imperfect to us when we judge it by some arbitrary standard of reference of our own, evil ought to have a positive character "opposed to the good". But so much is already admitted by both philosophers, since both hold that evil is actual as much as good. What they mean when they deny its reality is that whereas there is a definite principle of good there is no definite principle of evil. *I.e.*, the better a thing is, the more individual it is, and a "most perfect being," or principle of perfection would be the same as an absolutely complete individual, but, since the source of the imperfection of ourselves and other imperfect things lies precisely in the incompleteness of our individuality, the want of full inner unity in our lives, there can be no individual principle of imperfection or "absolutely *im*perfect individual". This seems to me to be the simple truth. Put in every-day language what it means is that God is at any rate conceivable, and that God's utter individuality is part of the concept of God (*Deus est suum esse*) but a Manichæan devil or evil God is the purest of pseudo-concepts. There are degrees of increasing badness, no less than of increasing goodness, but whereas we can conceive the existence of an upper limit to the series of increasingly good things, we cannot form the concept of a real lower limit, a thing "so bad that nothing can be worse," or "so incoherent that nothing can be more incoherent". Or again, the element of indeterminateness is actual enough *as* an element in everything but the Highest (this concedes to the moralist all he needs in the way of recognition that evil and sin are positive facts), but nothing actual is purely and utterly indeterminate.

Mr. Fuller has, however, a further argument by which he intends to show *a priori* that *any* Theodicy which does not assume a fundamental metaphysical Dualism must be fallacious. He argues that you can recognise differences in worth between individuals of the same kind, the standard of worth being the full and complete expression of the essentia of the kind. But when you come to assert that there is a similar hierarchy of kinds you commit an illegitimate *process*. One thing may be more perfect in its kind than another, but of two kinds we can only say that they are different. Thus the whole conception of the different kinds of things as forming a series with the *ens realissimum* as its upper limit is illogical. I confess I do not see the force of this contention. May I not admit that one horse is a better specimen of a horse than another, and yet hold that the most perfect horse is of less worth in the scheme of things than the most faulty man? Is it absurd to say that "even the finest of satires is only a specimen of the least truly poetical sort of poetry? It is at least commonly assumed that such comparisons are possible, and I cannot find any reasons adduced in Mr. Fuller's book to show that the assumption is illegitimate. So far as I can see he takes his central position to be simply "evident by the natural light". This is all the odder because *this* position plainly assumes the existence of "real kinds," whereas a further argument which is meant to drive Plotinus finally into a corner turns upon acceptance of the nominalist view that only the particular is real. Plotinus, says Mr. Fuller quite correctly, holds that there is not only an εἶδος of man but εἴδη of all the individual men in the Universe. Ergo, he ought to have seen that any given man is at any moment perfect as an expression of his individual εἶδος in the mere act of being himself and not some one else. Ergo, in the system of Plotinus there ought to be no room for any ethical or other progress. Now I do not see any force at all in this reasoning. No Platonist would admit that any bare particular, as we find it here and now, is a perfect expression of its εἶδος. It is not merely that *e.g.* Socrates here and now is not "the perfect man," he is not even, at any particular moment, "whole and perfect Socrates". There is "more in" Socrates than is expressed by what he is saying or doing at any moment, and the true Platonist would add, more than comes out even in the whole course of his earthly life. And common language is full of phrases which express the same conviction. We speak of a man as being "more truly himself" at some times than at others, we say: "he has put more of himself into this piece of work than into that other," we talk of a life of promise being cut short before the deceased had become "fully himself," and so on. Will Mr. Fuller say that all this language is meaningless, and that human selfhood is bare particularity devoid of any genuinely growing content? Unless he is ready to say this, the very sinew of his syllogism is cut through. In matters of scholarship, I should add, Mr. Fuller is by no means above suspicion. This is a pity, as it lessens the value of his book to students who cannot check his renderings of Plotinus by comparison with the Greek at the foot of the page. Thus *e.g.*, opening the book at random, I find on page 117 the statement that "one must not expect equal performance from unequal beings" (*οὐ γὰρ τὰ ἴσα ἀπαιτεῖν δεῖ τοῖς μὴ ἴσοις*) strangely rendered "one cannot make equality from unequal things" (unless "make" is here a printer's error). A worse case is the translation at page 86 of *οὐδὲν γὰρ δεινὸν μή ποτε περὶ σώματος προσδοκήτῃ τοιούτου*, "there is no danger that she (the soul) will be apprehensive for such a body" as "she can never experience *fear* about a body of this kind". (A very elementary knowledge of Greek should have taught Mr. Fuller what *οὐδὲν δεινὸν μή* means.) On the next page a serious error in doctrine is created by the mistaking of *ἔστη* for a tense of

εἶναι (a blunder which is made in other places as well). Plotinus says that "there is no evil" among the gods and adds καὶ εἰ ἐνταῦθα ἔστη, κακὸν οὐδὲν ἂν ἦν, "if things had *stopped* there (*i.e.* if the process of "emanation" had gone no farther) evil would never have existed at all". Mr. Fuller perverts this into the extraordinary sentence: "Had it (*sc.* evil) *been* there, it would not be evil". And there are not a few other errors of the same kind. What is perhaps more serious is that Mr. Fuller's reading is not sufficient to enable him to know accurately when Plotinus is simply quoting older thinkers. Thus in the very passage just referred to, Plotinus quotes verbatim the well-known "enigma" of Plato's *Second Epistle* which he, rightly or wrongly, believed with the rest of antiquity to be genuine. Mr. Fuller, apparently not knowing his Plato as he should, gravely tells us (p. 89) that "this is the Aristotelian doctrine, and Plotinus is consciously a good Peripatetic" in referring to it. Finally, I must protest as emphatically as I can against the reiterated rendering of λόγος in such phrases as σπερματικὸς λόγος, ἔννλοι λόγοι by the senseless "reason". The true rendering is simply *law* or *formula*. (*E.g.* such a formula as H_2SO_4 is exactly an ἔννλος λόγος.)

A. E. Taylor.

The Philosophical Works of Descartes. By E. S. Haldane and G. R. T. Ross. Vol. ii. Cambridge: University Press, 1912. Pp. viii, 380.

The translators have performed a work of real service to philosophy in giving us (I believe for the first time), a complete rendering of the *Objectiones* made against the *Meditations* with Descartes' replies. Dr. Ross appears to be responsible for the whole of the volume except the translation of Descartes' letter of expostulation on the subject of the "seventh objections," addressed to Father Dinet, S.J., Provincial of the Province of Pavia, which is signed by the initials E. S. H. It has long been a defect of English, and even of some popular French, editions of the *Meditations* that criticisms so important as those of Hobbes, Gassendi, and Arnauld, with Descartes' attempts to meet them, have been represented by mere brief summaries, often made without an adequate insight into the precise scope of the objections. Thanks to the industry of the present translators, the English reader can now study contemporary criticism of Descartes' Metaphysics for himself. I own that, had I been executing this work on my own account, I should have been sorely tempted to omit the whole of the stupid and vulgar effusion of Father Bourdin, S.J., which figures as the "seventh objections". Bourdin's work is, as Dr. Ross intimates, absolutely worthless, and Descartes' Notes on it are merely one long protest against being stupidly misunderstood. The suppression of the section would have inflicted no loss on the student of Descartes, and would have provided space for the inclusion of much more valuable matter. However, Bourdin's nonsense has obtained a traditional place in editions of the *Opera Philosophica*, and this may be regarded, perhaps, as an adequate reason for its inclusion in a translation. The full rendering of Gassendi's penetrating criticisms and Descartes' not always satisfactory or ingenuous replies, on the other hand, should by itself make the volume valuable to all students of the "new philosophy".

The translation, as a whole, may be commended as a faithful, though not always an elegant, reproduction of the original. In point of accuracy I should place it far above the previously published first volume of the work. It has also the merit of being made consistently throughout from the Latin text, variants due to the first French version being carefully

noted at the foot of the pages. As is natural in so lengthy a work there are slips here and there, for most of which weariness may be pleaded in excuse, and, owing, no doubt, to difficulties in proof-correction, a number of tiresome typographical errors have been incurred, some of which should never have been passed by the Reader of a University Press so deservedly famous as that of Cambridge. It is in no spirit of depreciation, but with a view to the issuing of a possible list of *Corrigenda* that I proceed to note some of these. Page 4, last sentence but one, there is a misapprehension, probably due to the erratic punctuation of the original. The sentence should run, "It is certain that the hot, if you will concede that there is such a thing, is hot and not cold in virtue of its own internal constitutional principles," etc. Page 12, last line, *have been* is apparently a printer's error for *has been*. Page 24, in the first sentence of the "second objections," a clause has somehow fallen out. At page 27, and again in Descartes' reply on page 42, there is a most unfortunate oversight by which the colloquial phrase "sole clarius," "as plain as daylight" is completely misrendered. On page 51 a strange misconception—apparently—of the meaning of *tenebras offundere* has led to a hardly intelligible rendering of the last sentence of paragraph 1, as well as to a footnote suggesting an "emendation" which, in fact, spoils the grammar of Descartes' phrase. Page 53, line 13, "neither do we have any idea". The word "other" has fallen out. Read "any other idea". The construction shows that this is what Dr. Ross meant to print. Page 61, line , for "this is the mind" read, as is clearly meant, "that is, the mind (exists)," or "that is, I am a mind". Page 67, line 27, *portion* is a printer's error for *position*; with reference to note 2 on page 69 the omission of a necessary *non* in the first edition of the Latin text was a mere printer's error which is corrected in later Elzevir editions (at least in that of 1678 which I have used myself for comparison with the translation). Page 80, line 13, "St. Augustine, a man of . . . such note". *Such* appears to be a printer's mistake for *much* (Latin, *plane mirandus*). I could wish that at page 121, where reference is made to legends of priests who have actually seen the Corpus Christi in their hands after consecration, Dr. Ross had not made Descartes speak of these tales as history. "History tells us," etc. All that the text says is *memoriæ proditum est*, "it has been related". We may be sure that Descartes did not regard such relations as "history," nor, I should suppose, did Arnauld

Page 125, in the title of Descartes' *Letter to Clerselier*, *solution* is a vexatious misprint for *selection*.

Page 137, line 8. Something has gone wrong in the rendering of the words *et nihilominus animadvertere saltem te esse*, "and yet that you recognise at least that you exist". I do not know how this comes to appear in the translation as "and fail utterly to notice that you . . . exist". On the next page, in lines 26-27, there is a little awkwardness, apparently due to failure to see that the verbs of the sentence are passive. Page 140, line 10, "the souls of the brutes are incorporeal, *viz.*, those which think," read for the last four words "*inasmuch* as they think" (the usual sense of the relative with a subjunctive).

Page 142, line 8 from below, "give up, I pray you, that extreme distinctness with which you perceive your own nature". Latin, *renuncia, quaeso quam distincte naturam tuam perceperis, i.e.* "*report*, I pray you, *how* distinctly you have perceived your own nature". Elsewhere *renuntiare* in its primary sense is rendered quite correctly.

Page 143, line 3 from below. Dr. Ross has got the best sense that can be made out of the sentence as it stands, but I would suggest that in the words *nisi sola incursione fiat*, *nisi* may be a "primitive error" of

Gassendi or his printer for (*non*) *nisi*, the sense being "since knowledge only enters by a sort of invasion, though it is elaborated," etc. I think this more conformable to the known opinions of Gassendi as well as better Latin than the printed text, and the dropping of *non* is a mistake of which there are several instances in the early editions of the *Objections*.

Page 155, line 4, a *not* has been omitted by oversight; read, "those Ideas nevertheless (do not) prove," etc. (*non tamen arguere*).

Page 161, line 6, the words *as long as* should be deleted. What follows, "you decrease the image's reality," is the grammatical and logical consequent in the sentence. The meaning is that on any theory which denies that "ideas" are corporeal effluxes from things, the reality of the idea is of a lower degree than on the corporeal effluence theory of Epicurus—and Gassendi.

Page 190, note 2. No "emendation" is called for. *Sigillatim*, which Descartes almost certainly wrote, is only a very common MSS. misspelling of *singillatim*, not a different word.

Page 195, line 20. "*But, how, O Mind*," etc. Surely *how* is a printer's mistake for *now*. The sentence also appears not to be meant as a question. Render, as Dr. Ross very possibly wrote, "*But now* . . . there is no difficulty".

Page 197, line "*is that why*," etc. Read simply, "have you a clear and distinct idea about this?" (*idcirco, viz.*, a clear and distinct idea of what it is to be unextended).

Page 200, note 1, the reference should be to Lucretius I., 305.

Page 293, line , "*each enjoys his own sensation*". Rather "his own conviction" (L., *suo sensu abundat*), Gassendi, means that he is content to leave other men to be as partial as they like to their own favourite *philosophies*, so long as they will leave him to enjoy his own.

Page 233, line 3. "I catch sight of the real Gassendi, and have ground for suspecting that he is a man of great philosophical eminence. Translation, "and *look up* to him as a man," etc., Dr. Ross forgets that *suspicio* rarely or never means "to suspect," except in the participle.

Page 367, note . The note is unfortunately worded. The Latin for Utrecht is not, of course, *Ultrajectinae* but *Ultrajectum; ultrajectinus* is an adjective like *Florentinus* or *Byzantinus*. Moreover the case of the adjective to be supplied in the place of Descartes' asterisks is the genitive singular *masculine* (*Iudicium sub nomine Senatus Academici* [*Ultrajectini*] *editum*).

It will be seen that the number of necessary emendations I have to submit is not large for a volume of nearly 400 large octavo pages, and that most of them deal with what are obviously typographical errors.

A. E. Taylor.

Proceedings of the Aristotelian Society, 1911-1912. Published by Williams & Norgate. Pp. 345.

The *Proceedings* of this society for the past year are somewhat swollen by the presence of two Symposia—one on "The Time Difficulty in Realist Theories of Perception" and the other on "Mechanism and Purpose". In the first of these the question is whether the fact that we 'see a star' by light which it emitted some time before the moment of our perception is compatible with the view that we really become directly aware of the star itself.

Mr. Carr, who opens the discussion, very unnecessarily drags in Einstein and the theory of relativity. He holds that the real question is

'where our perceptions can be'. As he says that on the realist theory they must be where the astronomical star is, he apparently means *percepts* by perceptions. He further holds that the time-interval makes it obvious that they cannot be at the astronomical star but must be in the perceiver. Otherwise they must exist before they are perceived, which he holds to be self-contradictory. But it is certainly not self-contradictory that a percept should exist unperceived, for the realist theory holds that precisely the same things exist sometimes perceived and sometimes unperceived. Nor is it self-contradictory that a perception should exist unperceived; for, except when we deliberately introspect, all our perceptions are in this state. The real point at issue is in fact a very simple one, and deals with time and not directly with space. It is just this: It seems obvious that the existence of an object of direct awareness is contemporary with the existence of the awareness of it. If the usual interpretation of physical theories be right it would be possible to have a perception due to a distant source of light at a finite time after that source had ceased to exist. Hence the object of this perception cannot be identical with the source of light which causes the perception. But naïve realism asserts this identity.

Mr. Carr's solution is based on Bergson, and, in common with the other participants in the Symposium, I am quite unable to follow it. I also subscribe most heartily to Dr. Dawes Hicks' criticisms of Bergson's apparent attempt to identify colours with vibrations. As far as I can see the crux of Mr. Carr's argument consists in the remark: 'If you object that the image no longer exists when you are perceiving it, you are bound to hold that no movement exists because the part accomplished has ceased to be and the part in progress is not yet'. If this be meant as an argument to show that we must assume that the past exists in some sense, I agree that it does: it still exists, but its existence which was present has become past. But this does not answer the question whether there can be a perception of an existent whose existence is not contemporary with that of the perception itself. And this is really the question at issue. If I had to defend naïve realism I should take the line that a present perception can have a past existent for its object and then try to show how it is that we make an erroneous judgment as to their temporal relations.

Prof. Jevons discusses the question on the lines that the star that sends out the light is a concept and that which is seen is a percept. This seems to me to amount to an admission that the difficulty is fatal to naïve realism, for what is perceived is not the concept, whilst it is the concept that the realist wants us to perceive.

The most exciting solution is that of Dr. Dawes Hicks, who holds that in all cases what we perceive is the sun as it is when we receive the light, though the stimulus comes from the sun as it was earlier. If in the meanwhile the sun has been annihilated we do not perceive anything in spite of the arrival of the stimulus from the past sun. I agree with Mr. Carr that this view makes the whole supposition that the past sun had has anything to do with the causation of our perception of the present one very arbitrary. Suppose that the sun exploded at a certain moment and that by the time the light sent out just before the explosion reached us pieces of it were widely distributed. Should we see them all in the positions they had reached? If not, how little must the present sun differ from the past one in order that a stimulus from the past one may enable us to see it? And in general, if Dr. Hicks's account be true, I do not see what evidence remains that light has a velocity at all. The usual ground for supposing that it has a velocity is aberration; but I do not see that there would be aberration on Dr. Hick's view—or, rather, some

explanation would be needed for that phenomenon which would cease to make it available as evidence for the finite velocity of light.

Mr. Russell contributes an important paper on "Universals and Particulars". He investigates the question whether we can dispense with universals or with particulars. He shows that at any rate we must assume universal relations on pain of a vicious infinite regress, and then there is no advantage in denying universal qualities. With regard to universals he shows that even in perceptual space there exist relations (like 'inside') which imply diversity in their terms and yet can relate terms that are conceptually identical. Hence you can have numerical difference with conceptual identity, and so you must distinguish between a universal and its particular instances. The paper contains much interesting discussion as to the nature of purely sensible extension as distinct from the intellectually constructed space which synthesises the several sensible spaces, and is as such never directly perceived.

There is a good article by Dr. Nunn on Animism and Energy. He traces the development of the conservation view from pure mechanics to physics and thence to metaphysics. He insists on what seems to me to be the most important point, that it is of no use to save the Conservation of Energy in the interest of mechanics unless you also save the Conservation of Momentum, a thing which all guidance theories *ex hypothesi* fail to do. Dr. Nunn holds that in the physical sense of Conservation all that is needed is that two classes of events, *e.g.*, one defined by the fact that $\frac{1}{2}\ mv^2 = \kappa$, and another defined by the fact that the heat liberated is constant, shall be capable of correlation. If then we could get classes of mental events which would be correlated in this way with physical classes Conservation would hold even if there were interaction. He thinks that the determining mark of such classes need not be the constance of some quantity, but he does not indicate how we are to form our psychical classes, and so the discussion is somewhat in the air.

In the Symposium on Purpose and Mechanism, Profs. Sorley, Bosanquet and Ward, and Mr. Lindsay took part. It is not possible to summarise such a long discussion, which came to involve the question in what sense purpose can be applied to the whole universe. Profs. Ward and Bosanquet join issue as to whether finite purpose is enough and as to whether there is any genuine mechanism, but neither has persuaded the other. What is curious is how very materialistically some of Prof. Bosanquet's pronouncements read.

There are two papers on Logic, one on Memory and Imagery, a description of Prof. Santayana's *Life of Reason*, and a long paper on 'The Experience of Power' in which Prof. Boyce Gibson introduces us to two French philosophers, Maine de Biran and De Tracy. On the whole, a quite entertaining volume of *Proceedings* of which the Society has no cause to be ashamed.

C. D. Broad.

The Psychology of Insanity. By Bernard Hart, M.D. Published in Cambridge Science and Literature Series.

In this little book the author gives an account of recent psychological theory of insanity, modified in certain respects by the results of his own experience with the insane. The hypotheses of Freud form the basis of the theory advanced, though it is also indebted to Jung and Trotter, the author criticising freely where the facts seem to require it. An interesting feature of the result is that the consideration of physiological conditions obtaining in insanity is entirely eliminated. Attention is confined

to the "conscious processes" to be found in deranged minds, the aim being to "describe" these "conveniently and comprehensively".

The most general characteristic of the very diverse phenomena which must be subsumed under the term "insanity" is "dissociation of consciousness". By this is meant a "division of the mind into independent fragments, which are not co-ordinated together to attain some common end" (p. 42). Slight dissociation is a frequent occurrence in normal life, as, for example, when one simultaneously plays the piano and worries over an ethical problem. In cases of lunacy the dissociation is frequently manifested as a complete break in the stream of consciousness. An insane person is at one moment a clergyman, at another a shopkeeper, the transition from the one *role* to the other being instantaneous and complete. A more precise definition of dissociation of consciousness is thus reached. "A system of ideas is said to be dissociated when it is divorced from the personality, and when its course and development are exempt from the control of the personality" (p. 52).

"Systems of ideas," briefly termed "complexes," are then considered. A "complex" has an emotional tone and tends to produce a definite kind of action. Each complex is a centre of "force". When complexes "conflict" a variety of results may follow, a particular result being dependent on the character and strength of the complexes involved. Sometimes an individual countenances a complex which conflicts with his personality by "glossing" or "rationalising" its precise import. In the case of the logically minded or morally sensitive, or again when the conflicting complex is of considerable extent, "rationalisation" is impossible. The complex is then "repressed". The author's thesis is that no complex is ever literally annihilated; and that, if of sufficient strength, it frequently rises and takes complete control of consciousness. Hence are to be explained such phenomena as double personality, etc.

Great emphasis is laid upon the conception of "repressed complexes," and it is held that a very large number of phenomena, superficially diverse, may be explained by its application. It is usually supposed, for instance, that a lunatic is irrational. In answer to this it is pointed out, first, that normal rational conduct proceeds from complexes, of the existence of which individuals may be ignorant, but which form the premisses which justify the conduct. If, then, a lunatic is impervious to logic, we are to suppose the existence of "repressed complexes," which for some reason it is not desired should be made public, but which yield a positive proof to the lunatic that the arguments stated to him are fallacious. That is to say, the lunatic is not really an irrational person; his apparent irrationality is due to the fact that we are ignorant of his premisses. Again: the hallucinations of the lunatic are supposed to be the "voice" of a "repressed complex". The interpretation of malicious intention which, in certain cases of insanity, the subjects put upon the conduct of certain persons, independent of the particular character of such conduct, finds a similar explanation.

The subject is presented in a straightforward and vigorous style, which is very appropriate to the requirements of the layman,—as it was meant to be. The scope of the book necessitates the omission of a number of questions, which are, nevertheless, of the first importance.

For instance, practically nothing is said concerning the origin of complexes. This should be a very fruitful field for investigation. Dr. Hart begins from the fact that complexes, having certain relations to one another, do exist, and upon this basis explanation proceeds. A most important question is: Is it possible to discover the factors in the production of a certain set of complexes, exercising contrary forces of differing strengths, in the one mind? Again, we may ask: Why is it that cer-

tain complexes in one mind do *not* conflict, while complexes essentially similar to them in another mind, *do* conflict? Are complexes themselves the source of their motor tendencies, or is this to be found in something which also leads to the production of the complexes? Again: What is the process which leads to the repression of a complex? Such are some of the questions which naturally arise from the facts and from the theory which Dr. Hart puts forward. It need hardly be added that certain psychologists will disagree about the elimination of physiology; but this will probably be due to a difference in aim.

Though intended as a popular exposition the book is an excellent introduction to a fuller study of the psychology of insanity.

BERNARD MUSCIO.

Sociology in its Psychological Aspects. By CHARLES A. ELLWOOD, Ph.D., Professor of Sociology in the University of Missouri. New York and London: D. Appleton & Co., 1912. Pp. xi, 417.

Dr. Ellwood has set out to write an "introduction to the psychological theory of society". He holds that "the development of sociology must depend upon the development of psychology". But "hitherto psychologists have been more concerned with analysing the structure of human consciousness than with developing a psychology of human action. The latest developments in psychology are, however, developments towards such a psychology of human activities or behaviour; and it cannot be doubted that when such a psychology has been fully developed, that (*sic*) it will supply the missing key for the interpretation of social phenomena" (pp. 94-95). "A society . . . is a group of individuals carrying on a collective life by means of mental interaction" (p. ix), and Dr. Ellwood somewhat dogmatically asserts that "it is the interrelations themselves, not their products, which the sociologist is primarily interested in. What he investigates is not so much the organisations and institutions of society as the associational processes which lie back of these, the processes of individual interaction which constitute them" (p. 15). Accordingly the greater part of sociology is simply social psychology, or "psychological sociology" as the author prefers to call it. This is not indeed the whole of sociology, "for sociology has also important biological aspects". There are thus two divisions of sociology, biological and psychological. Dr. Ellwood concerns himself with the latter division, and his investigations into it lead him to discuss the *rôles* of instinct, feeling, and intellect respectively in the social life, the nature of social mind, the forms of association, the "theory of social order," and in a concluding chapter the "nature of society".

There is a great tangle to be straightened out here. (1) "The social," in Dr. Ellwood's own words, is that which involves the psychic interaction of two or more individuals" (p. 16). If so, what of the distinction between "biological" and "psychological sociology"? Biological factors would thus enter into account only as affecting the psychical interactions of social beings, and would in this respect be on a par with, say, geographical factors, which also affect the psychical interactions of men. But then biological *as distinct from* psychological sociology becomes meaningless. (2) It is extraordinarily difficult to see how, on his premises, Dr. Ellwood can distinguish between sociology and psychology proper. Here is his own account of the distinction: "The distinction then between sociology and psychology is the same as that between all other sciences—*it is fundamentally a distinction of problems.*[1] The problems of the psychologist are those of consciousness, of the individual mind, as we commonly say;

[1] Author's italics throughout.

while the problems of the sociologist are those of the interaction of individuals and the evolution of social organisation. To put it in other language, the distinction between sociology and psychology is one of point of view. The psychological point of view is the individual and his experiences; the sociological point of view is social organisation and its changes. *Whatever, then, aims at explaining the psychical nature of the individual is psychological; while whatever aims at explaining the nature of society is sociological*" (p. 59). Nothing could well be more confusing in itself or more directly contradictory of the statement (already quoted) that the "primary interest" of the sociologist is not the organisations of society but rather "the processes of individual interaction which constitutes them". Since nearly all the mental life of the individual is developed through and determined by social relations, we cannot possibly distinguish between "the processes of individual interaction," the concern of the sociologist, and "the experiences of the individual" (what experiences?)—the concern of the psychologist. (3) Whatever be the primary interest of sociology, it must at all events have for one interest the results of the mental interactions of individuals, in the forms of social organisation, institutions of all kinds, systems of law and government, and so forth. These resultant social unities are not in any sense *processes* of psychical interaction. If the investigation of these facts is a psychological study, all sciences, the study of all human activities whatever, must be counted psychology, and the distinction "psychological" loses its meaning.

It will be evident that Dr. Ellwood has not devoted sufficient thought to an analysis of the foundation of his argument. Unfortunately the same hastiness characterises the book throughout. Psychological terms are used in a loose and unsatisfactory manner in passages where precision is essential. In the chapter on the "*rôle* of instinct in the social life" we have such naive statements as the following: "Just what beliefs in human society may be traced to an instinctive origin and what to other sources, psychologists as yet are hardly prepared to say"! In the chapter on the "*rôle* of intellect"—as distinct from those of feeling and instinct—the author speaks of "the individual intellect in its forms of imagination, reason and ideals"! These are by no means isolated examples. Perhaps the most curious instance of loose thinking is the footnote to page 367: "The purpose of this chapter is, of course, not to show that social progress is ethically desirable, but, assuming that it is desirable, to analyse the conception of social progress," etc.! There is nothing in what follows to indicate that Dr. Ellwood is not using the expression "social progress" in its proper ethical significance. It seems clear at all points that more rigorous thinking is essential before the author, who has certainly made an extensive and impartial study of sociological literature, can ever make any real contribution to sociological science.

R. M. MacIver.

Introductory Philosophy, a Text-book for Colleges and High Schools. By Charles Dubray, Ph.D. Longman, 1912. Pp. 624. 10s. 6d. net.

This is the work of a Catholic priest, professor in a Seminary at Washington. It embraces Empirical Psychology, Logic, Æsthetics, Ethics, Rational Psychology, Theodicy, and Outlines of History of Philosophy. The treatment is comprehensive, without being shallow; faithful to the tradition of the Middle Ages, while mainly regarding modern thought. The author shows a laudable concern to stimulate thought in his youthful readers. What is wanted of them, before they go to listen to a University lecturer on philosophy, is a generally accurate knowledge of the subject in its various branches, along with some capacity of serious reading

and consecutive thinking. What is not wanted in them at any time, but a thing they easily fall into, is an aptitude to reproduce the stock language of deep thinkers with little or no real appreciation of the meaning. This knowledge Dr. Dubray supplies, and against this danger he fortifies. He has produced therefore an excellent book for the hobbledehoy between school and university. Neither is it a work for learners only. A university lecturer will find it an excellent book of reference. The mountain heights of Hegel are safer when the climber descends at times, and takes a walk on the level with the plain man, especially that sturdy tramp named Aristotle, whom Dr. Dubray chiefly follows.

A book like this exposes so much surface as to be an easy field for criticism. Thus we read concerning the Platonic Idea: 'the highest idea is God' (p. 552). So St. Augustine certainly: but if Plato thought so, he never wrote it. Again, is there not a contradiction in the following? 'Could not God have created a world in which there would be less evil, less suffering, and less sin? We do not know . . . the world is good without being the best possible . . . . God chose the present order'. If this world is not the the best possible, God could have created a better; and in a better world, presumably, there would have been less evil. The matter at least requires further elucidation. Writing from the camp of the Dynamists, we avow ourselves wholly untouched by Dr. Dubray's missile against Dynamism: 'Dynamism cannot explain real extension, etc.' (p. 429). Not the extension of continuous matter, certainly; that is just what the Dynamist declares an impossibility. Extension according to him is a property of space, marked by matter, matter being phenomenally continuous, noumenally discontinuous, dotted up and down in space, and having its place there. The Aristotelian school, so the Dynamist will tell Dr. Dubray, confounds *space* with *place*, which is a confusion of infinite with finite. The universe as a whole has its *place*, which place is probably moving in space, a movement however impossible for any man to mark. As for *actio in distans*, that is largely a question of language. Instead of 'point-centre of force' say 'centered sphere of activity,' and the difficulty vanishes. Thus much to show that, as might have been anticipated, Dr. Dubray's comprehensive survey touches on themes of discussion manifold. That indeed is the beauty of philosophy. It will not go all into one book, no, not ten thousand volumes.

The following is a favourable specimen of Dr. Dubray's manner, and what we may call the 'American shrewdness' which pervades him throughout:—

'(*a*) The agnostic attitude is attractive on account of its *apparent humility*. In reality it includes a *great presumption*, that of determining exactly how far human reason can go. There is some humility in saying, "I do not know," but it is quite different to say: "It is unknowable".

'(*b*) In fact, how can one say of a thing that it is unknowable without having made a comparison of it with the capacity of the human mind, and therefore without having already *some accurate knowledge*, not only of the mind's power, but also of the object which is supposed to transcend this power?

'(*c*) Can we know the *existence* of a thing, and at the same time be utterly ignorant of its *nature?*"

This, of course, does not end the matter. It is easy to frame a reply on the part of the agnostic. But Dr. Dubray's aim is not to close, but to open discussion.

JOSEPH RICKABY.

The Beyond that is Within. By Emile Boutroux. Translated by Jonathan Nield. London: Duckworth & Co., 1912. Pp. xiv, 138. 3s. 6d. net.

This is an excellent volume. It consists of three essays, dealing respectively with the relations between science and human activity, morality and religion, science and philosophy; the result being to show interconnexion throughout.

In the first essay, which gives the title to the book, M. Boutroux asks if there are evidences in us of something which is beyond, or not of one piece with, science. The result of the discussion is to vindicate the right of art, morality and religion as against science, by showing, on Kantian lines, that the scientific conceptions themselves rest on something deeper. What this something deeper is, is shown in the "veritable creation" which takes place in the adaptation of "hard" conceptions to intuition, which goes beyond them, and can never be completely exhausted by them. The power which thus joins conception with intuition is essentially the same as "life," the "free activity" of man, which is "creative," and finds its outlet in art and morality. We may perhaps interpret M. Boutroux's position by a reference to Kant. The central thesis set forth in the Subjective Deduction of the Categories is accepted as the starting point, and Kant's "blind but indispensable" faculty of imagination is shown to be that essentially creative power which we call life, and which, at its highest level, is reason conceived as the union of thought and action. What produces objectivity in the field of science, produces objectivity also in all its activities; and the result of its activity is not merely a phenomenal world over against a noumenal, but reality itself.

This is developed in the two succeeding essays. Morality derives its precepts from something beyond scientific experience. But it cannot be regarded as self-contained. Morality not only implies a faith that its ideals are capable of being realised; it implies further the actual existence of something corresponding to these ideals. We are thus led on from morality to religion; and M. Boutroux shows how the ideals of morality have indeed come from religion. Morality and religion are thus not antagonistic, but neither are they identical. "From religion proceed, as from a life-giving and creative principle, those ideal conceptions of human destiny, those generous enthusiasms, those impetuous yearnings after what is unknown, those strong and tireless energies in pursuit of a superhuman perfection, which uplift humanity, and urge it to endless strife with things and with itself. Morality constitutes the reflexion of reason on the manifestations of religious enthusiasm . . ." (p. 93).

In the third essay the relation between philosophy and science is discussed. There is not one science, but many; and each science rests on its own postulates, which are supplied by intuition. When we examine the postulates of the various sciences, these turn out to be just the postulates implied in all action. Thus the sciences and human action spring from a common root reason; and hence, though human action falls outside of science, science has no right to deny it value or reality. "That which characterises reason, that which constitutes truly its essence and its value, is its capacity of blending into an indissoluble whole, the conditions of action and those of knowledge . . . . She represents, in herself, intellect in immediate contact with being, thought secretly one with action" (p. 127). And consequently, "If reason, thus understood, is justified in the eyes of a reflection which starts from consideration of the positive sciences, the speculations which express the life and the development of that reason are themselves legitimate. Now, these speculations are nothing else than what is called Philosophy" (p.

128). An excellent discussion follows, of the search for a concept which shall express adequately the relation between philosophy and the sciences; we find it, it is suggested, in the notion of solidarity.

Mr. Nield's translation is extremely good. It reproduces faithfully the spirit of M. Boutroux's writing, without any of the awkward constructions so often met with in a translation. May we suggest that the words "external relations," on the last line of page 131, should be avoided, as having misleading associations? What M. Boutroux seems to be referring to is some such thing as "the relations which things appear at first sight to have".

LEONARD J. RUSSELL.

The Meaning of Christianity. By FREDERICK A. M. SPENCER, M.A. London: T. Fisher Unwin, 1912. Pp. 420. Price 7s. 6d. net.

The modest name of this ambitious book is a sign of the times. A few generations ago it would have been entitled *Summa Theologiæ*. It runs through the whole gamut of theological questions from the genesis of religion to eschatology. It is essentially reconstructive. It seeks to "correct and develop," with reference to modern scientific and psychical research, the views of the Gospels and the Fathers. It quotes with Catholic appreciation Origen and Oliver Lodge, St. John and Prof. James. On almost every page one discerns Mr. Spencer's efforts to blend the orientation of a scientist with the temperament of a prophet.

The argument may be briefly stated. Religion is activity of souls which is manifested in the spiritual life. The spiritual life is a natural extension of the life which appears on different levels in animals and men. In man we find indications of the spiritual life which point to its complete realisation. Is the present dispensation favourable to the growth of the spiritual life? The discussion of this question leads through chapters on God, Christ, the Holy Spirit, Sin, Atonement, Grace, Institutions of Christianity and the End of the World. The evolution of humanity will gradually lead to spiritual expansion.

So far, Mr. Spencer's frank and undogmatic treatment has been illuminated by real religious enthusiasm. But in the remaining chapters that same enthusiasm leads him to promulgate strange views in a singularly dogmatic strain. Kant in his *Anthropologie* draws an interesting distinction between prophecy and soothsaying. We would fain class Mr. Spencer among the prophets. But Kant would not agree with us. A German librarian would have some difficulty in deciding whether to class the book as *Theologie* or *Geheimwissenschaft*. Mr. Spencer is quite familiar with the after-life. All souls attain immortality. It is "far more certain" than the universal validity of natural laws that souls pass through many incarnations. These incarnations take place in the same globe, and the souls alternate between male and female bodies in order to develop male and female qualities. The book ends with an edifying vision of the Kingdom of God, realised on this globe, and tenanted by these hermaphroditic souls. If Mr. Spencer advanced even plausible grounds for the immortality of the soul (the keystone of his system) he would have a certain justification for erecting his own theories on that supra-Stygian arch. But the following arguments will show the quality of his reasoning: "If there were no experience for an Ego, at least there would be lack of experience for that Ego" (p. 358). "An Ego is indestructible. It remains as the eternal possibility of consciousness" (p. 359). "Were the self to suffer real annihilation, there would be nothing to occasion the sense of all not

being well, when a soul had died" (p. 359). In every case, the fallacy is painfully obvious.

The weakest strand in the book is its treatment of the Author of Christianity. In a long chapter on "The Resurrection," the reader will find not the slightest hint that the Gospels contain any suggestion that Christ rose from the dead. So, in the chapter on "The Atonement," we have an abundance of instances of conversion, from St. Paul to President Finney, but only a cursory reference to Christ's own consciousness of the meaning of the atonement. A book which consistently minimises the fact of Christ can hardly hope to be an adequate exposition of the meaning of Christianity, even for the "modern mind".

G. A. JOHNSTON.

Psychology. A New System Based on the Study of the Fundamental Processes of the Human Mind. By ARTHUR LYNCH, M.A., C.E., I.R.C.P., M.R.C.S.E., M.P. London: Stephen Swift & Co., Ltd. 2 vols. Pp. xxiv, 378; xv, 379-814. Price, 10s. 6d., net, each.

About two such pretentious volumes as these a few words must be said, although one would prefer to lay them aside without comment. The Fundamental Processes are twelve in number: Immediate Presentation, Conception of Unit, Memory, Association, Agreement, Generalisation, Feeling of Effort, Impulse, Hedonic Sense, Sense of Negation, Conception of Time, Conception of Space. "It is impossible to refer to any one of the Fundamental Processes without reference to others. Nevertheless they are distinct." The first volume contains chapters on The Fundamental Process; The Conception of Unit; Addition, Substraction, Multiplication, etc.; Operations with Spatial Relations; The Axioms; New Views of Geometry; Problems of infinity and Imaginaries; Examination of Fechner's Law; Memory and Reason. Volume ii. discusses Questions of Research, The extended operation of reason in Scientific fields, Association, Externality, Ego and Will, Dreams, Physiology and Psychology, Reciprocal Interpretations of Physiology and Psychology, The Feeling of Effort, The Development of Psychology, and Indications of Progress. The scientific standard of the book may be gathered from certain sentences, which appear amongst the copious notes to the text: "In the preceding account of memory I have relied as far as possible on my own observations and experiments, for beyond that lay a perilous sea of literature" (p. 305); "The references [to the literature concerning dreams] in standard works of general psychology are too numerous to admit of mention" (p. 618). Still, one may admire the diligence the author has displayed in writing up the names of the writers and the titles of works dealing with so many subjects, in so many languages, from so many journals and years.

HENRY J. WATT.

The Thought in Music. An Enquiry into the Principles of Musical Rhythm, Phrasing and Expression. By JOHN B. MCEWEN, M.A., Fellow and Professor of Musical Composition, Royal Academy of Music, London. London: Macmillan & Co., 1912. Pp. viii, 233. Price 3s. 6d. net.

This book works over a number of the main topics connected with the general psychology of music, but it can hardly be said to add anything to

our knowledge of them or to make them more approachable. The confusingly reiterative design of the book detracts much from any introductory value it might have. The psychology of rhythm upon which it is founded is both amateurish and vicious. "The dimensions of what can be grasped in one intuitive act of thought" is "the Unit of Thought". That is the bar, although "it manifests an external instability which drives the musical sense to balance it by movement to a second bar". "There is only one simple metre, and all others are compounded of various arrangements and values of this. This basic metre is called Duple." "Triple metre is obtained by associating in regular sequence two duples of different value whose periods are in the proportion of two to one, or one to two." This "theoretical and abstract" Part I. is followed by Part II., Practical and Concrete, where we read that "the unit of speed must be understood as the dimension of the bar as *thought* by the Composer—not necessarily as written". "All quick movements which have only one beat in the bar as written—such as most Scherzos, etc.—have a real bar made up of contrasted strong and weak beats, which is worth two or more of the bars as written. In a similar manner, in slow time the bar as written is often equivalent to two or more real bars." Prof. McEwen's efforts to indicate the *real* rhythmical effect of the Scherzo of Beethoven's Choral Symphony, of Mozart's Sonata in C Minor, and of Bach's 22nd fugue (vol. ii. of the well-tempered Clavier) will hardly meet with hearty acceptance. All cases where the unit of thought seems to be longer or smaller than two beats or bars are examples of augmentation or diminution of the unit of thought. The true rhythmic progression is, moreover, from weak to strong. It may seem not to be so in any particular example, such as the opening of Beethoven's Sonata Appassionata, but it really is so, and in performance this must be realised and displayed. The phrase, whose normal form is said to be four bars, is treated after the same methods. It may seem to be otherwise according to Beethoven, Schubert, Brahms, etc., but that is only because we see them through the clerical conventions which bound them.

First Book in Psychology. By M. W. Calkins. Third edition. New York: the Macmillan Co. 1912. Pp. xix., 426. Price $1.90 net.

The Persistent Problems of Philosophy. By M. W. Calkins. Third edition. New York: The Macmillan Co. 1912. Pp. xxvi, 577. Price $2.50 net.

The first edition of Prof. Calkin's *Psychology* was reviewed in Mind for October, 1911. The revision emphasises the essentially social nature of the conscious self (the contents of the chapter formerly devoted to the 'social consciousness' have therefore been transferred to other portions of the book), accentuates the fact that the study of the self, as thus conceived, involves a study of behaviour, and does away with certain expressions that might be interpreted in terms of an atomistic psychology. The principal changes of doctrine occur in the discussions of attention, of the analysis of will, and of the time-consciousness.

The *Problems of Philosophy* was reviewed in Mind for July, 1907. The new edition relates the conclusions of the work to the more recent of contemporary philosophical writings, and in particular refers to the arguments against idealism urged by the 'neo-realists'. Attention is called to two points of terminology: the distinction between 'qualitatively' and 'numerically' pluralistic or monistic systems, and the use of the term 'idealism' in the widest possible sense to mean 'the conception of reality as of the nature of consciousness'.

Mind and Its Disorders. A Text-Book for Practitioners and Students. By W. H. B. Stoddart, M.D., F.R.C.P. Second Edition with Illustrations. London: H. K. Lewis, 1912. Pp. xvi and 518.

This is the second edition of a work noticed in a former number of Mind. So rapid is the accumulation of material that, although the first edition appeared little more than three years ago, some additions have been found necessary. The chief additions are two chapters on Psycho-analysis—the psychopathology of the Freudian school. The author also states that "Part III. has been re-arranged in such a way as to establish more clearly the similarity of the various toxic psychoses". It may be said that, as compared with twenty years ago, the new notes of the study of morbid psychology are the methods of the Freudian school and the toxic psychoses. It is almost unnecessary to repeat that the volume is an excellent text-book of Insanity.

W. L. M.

La Vraie Éducation. By Paul Gaultier. Paris. Hachette & Cie. Pp. 284.

This is a well-written and refreshing book upon an old subject. In more ways than one the author recalls the wisdom of Plato. By education he means "la formation de l'esprit et du corps dans leur integralité et leur harmonie". This definition itself carries with it the fragrance of Hellas "en un temps où l'on confond volontiers l'éducation avec l'instruction et l'instruction elle-même avec un entassement de connaissances, dans la majorité des cas purement verbales."

Two sentences in the introduction are worth quoting side by side: "L'éducation ne peut s'opérer à vide, demeurer exclusivement formelle" . . . "De même, on apprend à être fort, à aimer et à vouloir le bien. Voilà l'essentiel."

In four consecutive chapters M. Gaultier discusses The Education of the Body, the Education of the Feelings, the Education of Intelligence, and the Education of the Will. He makes clear, however, at the outset that "le corps n'est pas séparé de l'âme . . . Il est cette âme même incarnée rendue sensible à tous, aperçue, pour ainsi dire, du dehors. Aussi bien l'esprit bénéficie de ce qui profite à l'organisme, pâtit de ce qui l'étiole."

And in his concluding chapter he definitely asserts: "Le corps, la sensibilité, l'intelligence et la volonté doivent être cultivés ensemble. Nous n'avons traité séparément de leur formation que pour les commodités de l'étude."

The great end of education ought to be the formation of complete beings: "des femmes et des hommes de cœur, robustes, intelligents et forts".

The educator must therefore utilise as much as possible the common elements in human nature to form men and women worthy of the name. Our author would on this account simplify instruction: "L'enseignement qu'il soit littéraire ou scientifique, doit être simplifié, réduit à l'essentiel, aux grandes lignes." At the same time he provides for the utilisation of individual excellencies. "A chacun son originalité."

John Edgar.

Le Conflit de la Morale et de la Sociologie. Par SIMON DEPLOIGE, Président de l'Institut Supérieur de Philosophie (Université Catholique de Louvain). Second ed. Louvain and Paris, 1912. Pp. xvi, 424.

This work aroused much interest in certain circles in France and Belgium when it first appeared early in 1911, and already a second edition has been published. The only addition consists in a preface in which the author takes the opportunity to reply to a critic of the *Revue de Métaphysique et de Morale.*

Mgr. Deploige's book is essentially a criticism of the sociological method and postulates of M. Durkheim and his school. This school holds, according to M. Deploige, that one must choose between ethics and sociology—as a matter of fact even the extremer members of the school, such as M. Lévy-Brühl, say only that the opposition lies between "theoretic" or *a priori* ethics and "scientific" ethics based on sociology. M. Deploige sets out to show that there is no such conflict; that there is only a factitious opposition due to one-sided systems both of ethics and sociology. To prove his point he analyses—very cogently and on the whole impartially—the system of M. Durkheim. He then proceeds to trace its source in German thought—though M. Durkheim, who ought perhaps to know, denies the paternity which M. Deploige provides. Finally the author points out that in the Thomist system there can be found the solution of all M. Durkheim's difficulties. It is a little curious to find Mgr. Deploige offering to MM. Durkheim, Lévy Brühl, and company the system of St. Thomas as a *terrain de ralliement.* It was hardly necessary to go to the *Summa Theologica* to prove that there is no essential opposition between ethics and sociology. But the work, given its presuppositions, is very well done.

R. M. MACIVER.

La Sophistique Contemporaine: petit examen de la philosophie de mon temps. Par GEORGES DUMESNIL. Paris: Beauchesne et Cie., 1912. Pp. 116.

M. Dumesnil begins by disclaiming any invidious implications which may cling to the word "sophistique". French philosophy appears to him to be in a similar position to Greek philosophy in the time of Socrates, and he here presents "*les notes d'un philosophe tout à fait hors de mode, puisqu'il est socratisant*". More than half the book is taken up by a criticism of Bergson, a few pages are given to Chide; they are the representatives of metaphysic. Next we find brief studies of H. Poincaré and Milhaud as typical of the position of science; then a somewhat longer criticism of the ethical views of Rauh and Levy-Brühl. In the concluding section on religion M. Dumesnil sets forth his aim, which is to vindicate the orthodox Roman Catholic position against the tendencies of anti-conceptualism. Modernism is set aside; the encyclical *Pascendi* has, it appears, settled that question. The science of religion is held to be based on the erroneous assumption that every religion is social by essence and by origin; its students aim at suppressing all religion. But M. Dumesnil holds that the Catholic Religion has a character which distinguishes it radically from other religions: "la religion catholique est la seule qui parle; elle est la *Religio sapiens*".

As a piece of criticism this book is neither sufficiently exhaustive nor sufficiently radical. But it is pleasant reading, and M. Dumesnil is evidently not one of those who, like Johnson's friend Edwards, have

been hindered from becoming philosophers because "cheerfulness would always keep breaking in".

ARTHUR ROBINSON.

Principien der Metaphysik. Von Branislav Petronievics. Erster Band. Zweite Abteilung. Die realen Kategorien und die letzten Principien. Heidelberg: Carl Winter's Universitätsbuchhandlung. Pp. xxxviii, 570.

The first part of the first volume of this monumental work was reviewed some years ago in this journal. Its successor is divided into two sections, the first of which deals with metaphysical questions, the second with hypermetaphysical. By metaphysics, the author means a thorough inquiry into the constitution of the actual universe; by hypermetaphysics the inquiry into the constitution of any conceivable universe. None can doubt the existence and importance of metaphysics but only a few are able to appreciate the necessity and the value of hypermetaphysics. This latter deals with the problems of the one and the many, the bounds of possible knowledge, the ultimate meaning of negation, and the like. The word 'Negations-akt' appears very frequently in the book, and, as was fully explained in the review of the first part, is used in a somewhat peculiar sense.

That the book is interesting goes without saying. Consider what it promises. A deduction of the immortality of the soul; a proof of modified pessimism; a refutation of naïf realism; a combination of Leibnizianism and Spinozism hight 'monopluralismus': the suggestion that the universe will probably attain a condition of complete equilibrium, that the death of the organism is thus infinitely probable, while, at the same time, it is possible that orgauisms shall arise which neither eat, nor grow, nor die: an acknowledgment of inspiration drawn from Lotze and Hegel coupled with a complete abjuration of Kant and all his works—what, metaphysically speaking, could be more exciting? Our excitement may abate somewhat when we learn that the author's rejection of Kant is due to his own belief in 'the absolute reality of direct experience, and the consequent impossibility of every kind of subjective idealism and illusionism'. His modified pessimism, again, is a very chastened doctrine indeed. It is neither pessimism *pur sang* (which maintains that things are as bad as they could possibly be), nor even pejorism (which maintains that they are very bad indeed). Malismus, as Dr. Petronievics styles his theory, means only that the evil outweighs the good just a little, which is, being interpreted, that in the present state of affairs pain slightly outweighs pleasure. There is another respect, also, in which the present work ought to delight the soul of the metaphysician. We are invited to consider, not conjecture only, but proof positive, and withal a double proof. The important doctrines of the book are proved both by reasoning which is 'analytical and empirical,' and by reasoning which is 'synthetical and deductive'. The author prefers the first method, but would not venture to publish unless he could carry conviction by the second method also. Both methods yield certainty and not merely probability (which is the most that induction can do).

It is impossible, in this place, to deal with the immense range of argument which the work contains. I shall content myself, therefore, by considering the reasoning of the fifth chapter which is, by the author's own admission, the most important in the first part, and illustrates the importance of the '*analytisch-empirisch*' method.

The theory of *naïf* realism (as maintained by Avenarius, Mach and others) and the theory of immanent idealism (*der absolute Bewusstseinsrealismus*) fail because they are forced to admit directly or indirectly that there are selves in reality which have spatial relations while they cannot consistently account for this fact. To do so it is necessary to draw a distinction between the knower and the content of his consciousness. The knower must be an unconscious simple substance occupying position in space and his nature partakes of will since he is the productive cause of these contents of consciousness. This solves the problems of quantity and quality as forming part of the structure of the world. These simple selves (*die einfachen Einzeliche*)must really be unextended points. An absolute, non-spatial, simple being is a contradiction, since simple means unextended, and the unextended, being the direct contrary of the extended, can only be a point.

Is it really necessary to go farther? The '*analytisch-empirisch* 'method is demonstration, I suppose, because it gives the only possible analysis of the facts. But surely if the facts be that there are selves, which are distinct from the objects (or contents) of consciousness and also have certain necessary relations to space, there are many possible analyses. Selves must be unities, but why must they be simple? Why, again, must the knower be unconscious just because he is not the known. Surely one possible analysis is that he is directly conscious of the known. Selves again are unextended, but their relations to space might surely be stated in terms of relation to points or, for that matter, to parts of space without thereby implying that the selves were points of space. Nor do the author's previous or subsequent arguments shed light on the reasons for his arbitrary choice.

The book contains a very large number of misprints.

J. Laird.

Platons Gastmahl. 3te Auflage. Neu übertragen und eingeleitet von Kurt Hillebrandt. Leipzig, 1912. Felix Meiner. (*Philosophische Bibliothek*, 81.) Pp. 128.

Platons Dialog Philebos, übersetzt und erläutert von Dr. Otto Apelt. Leipzig, 1912. Meiner. (*Philosophische Bibliothek*, 145.) Pp. 157.

Berkeley, Versuch einer neuen Theorie der Gesichtswahrnehmung und Die Theorie der Gesichtswahrnehmung. Verteidigt und erläutert, übersetzt und mit Anmerkungen versehen von Raymond Schmidt, durchgesehen von Prof. Dr. Paul Barth. Leipzig, 1912. Meiner. (*Philosophische Bibliothek*, 143.) Pp. xii, 152.

I. Kant, Anthropologie in pragmatischer Hinsicht. 5te Auflage. Herausgegeben, etc. von Karl Vorländer. Leipzig, 1912. Meiner. (*Philosophische Bibliothek*, 44.) Pp. xxii, 328.

J. F. Herbart, Lehrbuch zur Einleitung in die Philosophie. Mit Einführung neu herausgegeben von K. Häntsch. Leipzig, 1912. Meiner. (*Philosophische Bibliothek*, 146.) Pp. lxxviii, 388.

Hermann Lotze, Metaphysik (*System der Philosophie, II.*). Herausgegeben von Georg Misch. Leipzig, 1912. Meiner. (*Philosophische Bibliothek*, 142.) Pp. 644.

The firm of Meiner is deserving well of other than merely German students by its constant reproductions of the classics of ancient and modern philosophy at moderate prices and in excellently printed and edited form. Of the new volumes of the *Philosophische Bibliothek* before us the translation of Berkeley's *New Theory of Vision* and the later essay in its defence contains perhaps least for the English and most for the

German reader, as the translator has contented himself with a minimum of notes explanatory of historical allusions, and refers back to the companion version of the *Principles of Human Knowledge* for the narrative of Berkeley's life and all discussion of the general merits of his philosophy. The elaborate *Introduction* with which Dr. Misch enriched his recent edition of Lotze's *Logik* enables him similarly to dispense with all prolegomena to the reprint of the *Metaphysik*, which is enriched by the addition of Lotze's posthumously published essay on the *Principles of Ethics* and by an admirable index. The reprint of Herbart's *Einleitung in die Philosophie* should do great service in calling the attention of the younger students among us to the solid merit of a thinker who, in this country at least, has never been so widely studied, except by the professional "pedagogues," as he deserves to be. Even for those who may reject the fundamental propositions of Herbart's own system, the *Einleitung* must remain one of the most luminous and suggestive of all "first books" in Philosophy. The present edition contains a very useful further "introduction" by the editor to the Herbartian system in general. The reprint of Kant's *Anthropologie* has profited by the generosity of Prof. Kulpe, who edited the work for the Berlin Academy's *Kant*, and consequently contains much valuable matter which has never been made accessible before except to possessors of that monumental work. Students of Plato will welcome the versions of the *Philebus* and *Symposium*. No one has a better right to be heard on the many difficulties of the former dialogue than Dr. Apelt, and it is pure gain that he has seen fit to add to his version an Appendix dealing with the knottiest problems of exegesis. His textual alterations, however, mostly fail to commend themselves to my own judgment, and I observe that he has actually passed over the worst puzzle of the whole text (that connected with *τὴν ἀίδιον ῥῆσθαι* (*sic* B, *εἰρῆσθαι φάσιν* I)) without a word. Of the version of the *Symposium* it may be enough to say that the translation is, as it should be, *fougueux*, and the *Introduction* excellent as a study of Hellenic "erotic" temperament, though the translator is, I think, certainly wrong in his curious theory that Plato intends anywhere in the dialogue to glorify himself as the Messias at the expense of his "precursor" Socrates.

A. E. Taylor.

Neues zu Sokrates, Aristoteles, Euripides. Von Julius Baumann. Leipzig, 1912. Pp. 127.

Three essays of which the first consists of an analysis of *Memorabilia*, Book I., the second is a version, with interspersed comments, of Aristotle, *Physics B*, and the third deals with Euripides' conception of the world and the *Grundgefühl* of later Hellenism and their significance for ourselves. I cannot myself find anything "new" in Prof. Baumann's essays, unless it is his curious view that the common-places of Xenophon's Socrates form the basis of a model philosophy which retains its permanent value for ourselves and, apparently, for all time to come. The translation of *Physics B* will no doubt be found useful by students who are beginning to approach the Aristotelian doctrine of the "Four Causes" for the first time, but the exegetical comments contain nothing which does not seem to me familiar enough. The third essay, which might have been made the most interesting of the group, results in little more than establishing the far from "new" result, that Euripides and the writers of later Hellenism generally combine a not very well defined

belief in God and God's judgments with a recognition that the course of human affairs often turns out unexpectedly; it is therefore well not to reckon too much on permanent prosperity; one should trust in God, but not forget to keep one's powder dry, and should remember that even if God and the powder-flask both fail one, it is always possible to face destiny courageously. Naturally Prof. Baumann finds it easy to produce numerous illustrations of so widespread a theory of life from all sorts of modern sources, ranging from the hymns of Gerhard to the love-letters of Bismarck and the works of Oscar Wilde. As he admits that parallels are equally common in earlier Greek literature from Homer on, it is not easy to understand why he should regard this conviction that "God moves in a mysterious way" as specially characteristic of Euripides and *later* Hellenism. I note that he is much too ready to draw inferences about the poet's beliefs from fragments of lost dramas, where the views expounded may be, for all we know, as far removed from those of the author, as they are dramatically apposite. *E.g.*, one has no more right to infer anything about the moral beliefs of Euripides from the casuistry of his Macareus than one would have to deduce a theory of Shakespeare's personal convictions from the utterances of Hamlet. If *Hamlet* had only been known to us by citation in Anthologies we should certainly have possessed the monologue on suicide, and might have been tempted to draw the inference from its silences that Shakespeare rejected the current theological view of the act as an offence against God. Possessing, as we do, the whole play, we know that it puts the theological view into the mouth of Hamlet himself as a plain statement of acknowledged fact ("or that the Everlasting had not fixed His canon 'gainst self-slaughter!"). For so small a work the book is wonderfully full of misprints both in Greek and in German.

A. E. Taylor.

Wilhelm von Humboldt und Die Reform des Bildungswesens. By Dr. Eduard Spranger. Berlin: Reuther & Reichard. Pp. 256.

This is the fourth volume of the series of "Die Grossen Erzieher," and its subject introduces us to one of the most interesting periods of modern educational, and political history—the Renaissance of Germany at the beginning of the nineteenth century. Of this revival of German greatness through education Fichte was the prophet and apostle, Wilhelm von Humboldt the organising genius.

The introductory pages provide a background by sketching the condition and the currents of education in the eighteenth century and the opening of the nineteenth century.

There are four main sections of the book. The first deals with the life and personality of Humboldt, and with his theory of education and Neo-Humanism. The second traces the steps in the organisation of the national control of education. The third sets forth the marvellous progress of reform in different grades of schools from the elementary school to the University—and naturally devotes special attention to the Gymnasia which now entered upon the long career which has made them famous. The fourth section shows the later development of the influence and tendencies of Humboldt, and enables us to realise how his genius is still affecting the evolution of German education.

The volume is worthy of the attention not only of the student of pedagogy, but of all who believe that education "exalteth a nation".

John Edgar.

Hermann Lotze, Logik (System der Philosophie I.). Herausgegeben und eingeleitet von Georg Misch. (*Philosophische Bibliothek*, vol. 141.) Leipzig: Verlag von Felix Meiner, 1912. Pp. cxxvi, 632.

A work of such historical importance and so well known to all English-speaking students as Lotze's *Logik* could not, of course, be criticised in these pages, on its reissue, without impertinence. It will be enough to call the attention of our readers to the mere fact that an excellent edition of it can now be had in the *Philosophische Bibliothek* for the modest price of 7·50 marks and that we are promised a companion volume to contain the *Metaphysik*. The present volume is enriched by a long and learned *Introduction* from the pen of Dr. Misch, dealing with the various stages in the development of Lotze's thought, and by a German version of the very interesting essay by Lotze in the *Contemporary Review* (1880), on "Philosophy in the Last Forty Years," which, on one side, is of some historical importance as heralding the revolt against that "Intellectualism" which Lotze was himself only prepared to defend with considerable concessions. The publishers have also added to the value of the reprint by including as frontispiece an admirable portrait of the philosopher, taken from an original of the year 1870. It greatly facilitates the use of the work that the pagination of Lotze's own second edition of 1880 has been carefully preserved. I should mention also that there are good Indexes of names and subjects.

A. E. T.

Fortschritte der Psychologie und ihrer Anwendungen. Edited by Prof. K. Marbe, with the assistance of Privatdozent Dr. W. Peters. Parts to form a volume of some 24 sheets. Price 12 marks per volume. Leipzig and Berlin: B. G. Teubner. 1912.

The first part contains an introductory essay by the editor, showing how important and indispensable psychology has already become for the most various scientific and practical disciplines, such as Natural Science, Medicine, Phonetics, Philology, Literary Science, Æsthetics, History, Pedagogy, Jurisprudence, Social Economics and Philosophy. The following parts will contain papers on the psychology of observational errors of testimony, of errors of writing, and of the inheritance of intelligence according to statistical correlations, an experimental contriaution towards the study of the instruction of the deaf, and, lastly, Marbe's psychological report on the Mülheim railway catastrophe.

Henry J. Watt.

Festkrift tillegnad Edvard Westermarck, i anledning av Hans Femtioårsdag, den 20 November, 1912. Helsingfors, 1912.

On the occasion of Dr. Westermarck's fiftieth birthday his pupils decided to offer him their homage and congratulations in the form of a *Festschrift*; for which a word is lacking in English, though the thing is not unknown amongst us. There have likewise associated themselves with this complimentary undertaking Dr. Th. Rein, ex-vice-Chancellor of the Helsingfors University, who was formerly Dr. Westermarck's teacher; and two of his English colleagues, Dr. A. C. Haddon and Dr. W. H. R. Rivers. It is perhaps permissible to say here that other anthropologists who are sensible of Dr. Westermarck's great services to the science of man would have gladly offered to contribute their literary mite, had they known that such a publication was in hand.

It is not customary for the recipient to look a gift-horse in the mouth; and that a disinterested third person should offer to do so for the benefit of those concerned might be taken ill by one and all. It must suffice, then, to take stock of the very varied contents of this highly tasty and nutritious writers' pie. Seven of the essays are in English, six in Swedish, and one in German. "Public Opinion," by Th. Rein, deals with recent manifestations of the *vox populi* in Germany. "The Houses of New Guinea," by A. C. Haddon, provides copious notes on the various types of dwelling to be met with in a region where migrations and the consequent transmissions of cultural elements constitute a leading problem. "Wanderings of the Dead in the Folk-lore of the Kiwai-speaking Papuans," by Gunnar Landtman, presents some of the recent gleanings of a first-hand student of savages. "The Economic Aspect of the Intichiuma Ceremonies," by B. Malinowski, traverses Dr. Frazer's view that totemism has contributed little or nothing to the economic progress of mankind. "The Disappearance of Useful Arts," by W. H. R. Rivers, demonstrates the possibility of advantages in the struggle for existence, such as are provided by the use of the bow, of the canoe, or of the potter's art, being as it were deliberately thrown away owing to superstition or other causes. "The Clan as a Local Unit in Society," by Rud. Elander, shows that kinship organisation need not be at cross purposes with the principle of locality as a group-forming factor. "Some Superstitious Customs in Primitive Warfare," by R. Holsti, argues that primitive war brings about in most cases the survival of those who take magic most seriously. "The Conception of the Causal Relation in Sociological Science," by G. C. Wheeler, seeks to prove that a sort of causality may serve as a methodological postulate in the science of history, though it be not precisely the causality of the physicist. This essay, in particular, is one likely to interest the pure philosopher. "On Some Kinds of Duel in the North," by Thure Svedlin, brings the duelling of the Sagas into line with other primitive forms of the same institution. "The Place of Anthropo-geographic Synthesis in Sociology and the Philosophy of History," by K. R. Brotherus, exhibits the limits within which the influence of the material environment may be invoked in sociological explanation. "Bernard Mandeville's Theory of Society," by Ola Castrén, gives an account of the views of the author of the theory "that the moment Evil ceases, the Society must be spoiled". "Plato on Woman's Rights" (if this be a fair rendering of *Platons Kvinnopolitik*), by Rolf Lagerborg, embodies a review and appreciation of the famous theories of *The Republic*. "Hutton and Werner," by J. J. Sederholm, carries us back to the days when "Fire or Water?" was the master-problem of Geology. "Kites," by Yrjo Hirn, studies kite-flying from an anthropological and psychological point of view. This brings us to the end of the list of contributors, all of whom manage to say something well worth saying.

R. R. Marett.

Il Positivismo e i Diritti dello Spirito. Da E. Troilo. Torino: Bocca, 1912. Pp. xv, 365. Price, L. 5.00.

Signor Troilo has published many papers and several volumes on the history of philosophy from the point of view of positivism; the present work seeks to justify his conception of positivism as not only the necessary attitude of science, but also the only philosophy which does full justice to the claims of the spirit. It is in two parts, with three chapters in each.

Part I. shows that both monism and dualism are essential phases of philosophy, neither of which by itself gives a satisfactory account of the universe. Monism is necessary from the point of view of Being, dualism from that of Thought or Knowledge. In the first chapter, making good this argument, there is a criticism of various modern idealisms, from that of Berkeley to those of Hegel, Schuppe, and Bergson, the general conclusion being that from every point of view and for every system the monistic point of view is unrealisable, and is in fact abandoned. Unity is the law of Being, duality that of the Spirit (p. 86). The second chapter discusses the transition, both in the individual life and in the history of philosophy, from the primitive objective attitude of the mind to the secondary, subjective attitude, with an analysis and criticism of the views of Baldwin, Avenarius and Wundt; while in the third it is argued that this transition, though it has meant an enormous enrichment and development of the spirit, does not imply that the later idealistic attitude should have any preference over the earlier positivist one (pp. 154-155). The development has been possible, or has been fruitful, only so far as the two tendencies have been kept in close touch with one another.

The second part is "the philosophical justification of Positivism," with chapters on matter and form in positivism, positive methodology and theory of knowledge, and the rights and values of the spirit. Science is a kind of implicit philosophy, the most concise expression of its standpoint and outcome being the Renaissance formula, *Natura sive Deus*. It is true that the recent movements in science tend to the subjective view of the laws of Nature, *i.e.*, that they are either merely subjective interpretations of man, or at best, instruments by which the manifold of nature may be classified and conveniently dealt with. To this Troilo would add that we are able to create and to use these laws only so far as we ourselves, as subjective beings, as spirits, are the product of a continued adaptation to and contact with nature, *i.e.*, only because there is a correlation, an underlying harmony between the two terms. It is a repetition, in the relation of consciousness to Nature, of the harmony already found in the psychological and logical spheres, between the subjective and objective aspects. "Thus, underlying the subjectivity of our concepts, our schemes, our formulæ, our laws, there is a sort of nucleus, a root, of primary, essential and irreducible objectivity" (p. 266). This is, in brief, Troilo's philosophical justification of positivism. He rejects, entirely, however, the doctrine of relativity on which Spencer laid so great stress, and in fact attributes to it the subsequent victory of the idealist standpoint, especially in the theory of knowledge. The new positivism is based on the entire adequacy of thought to being, and it is only such a positivism which guarantees the full realisation of all the values of the spirit (p. 301). The development of this argument, however, is left for a subsequent work of the author, a "System of Neo-positivism". The present work is ably written, from its critical and apologetic point of view. The sympathy of the writer with idealism is so great that all the harsher, and perhaps one should add, the stronger elements of the old positivism have been expelled, and the new positivism is difficult to distinguish from idealism itself.

L'Esiglio di Sant'Agostino. Da L. M. Billia. Second edition. Torino: Fiandesio & C., 1912. Pp. xv., 295. Price, L. 4.00.

Under its somewhat fantastic title, *The Exile of St. Augustine*, this work is a defence of the idealism of Rosmini against the prevailing Neo-Scholasticism in present-day Catholic philosophy. It is a new and en-

larged edition of a volume published in 1899, and consisting mainly of a detailed criticism of a Belgian book by De Craene, on the "Spirituality of the Soul" (Louvain, 1897). Indeed, the greater part of its bulk consists of texts and quotations of considerable length both from antient and from modern philosophers; and the author himself is by no means concise. The chief argument is that ideas are not a product or creation of the human spirit, but a manifestation in us of the divine Intelligence and Will, which are the source alike of the existence and forms of Nature, and of the truth and certainty of human knowledge. St. Augustine, Malebranche and Rosmini are vigorously defended against Aristotle, Aquinas, and all the Neo-Thomists of to-day. Running through the whole work are the familiar ideas of Rosmini, not only in philosophy proper, but also in politics and in religion; the idea, for example, of a universal Church which, while remaining Catholic, shall return to the purity of the Gospel teaching; a Church of the State, but with less priestcraft and ceremonial a nd greater liberty both of thought and of action. Some idea of the contents of the work may be gained from the titles of a few of the chapters, which, for some reason, the author calls *Respiri:* "The Thomist movement hostile to idealism, which it does not understand, and friendly to positivism;" "Idealism classified and defended from calumny;" "Sensation and Idea: Inadequacy of Taine's view;" "The Psycho-physics of Plato, of Malebranche, and of Rosmini" (three chapters); "Materialism of the Neo-scholastics."

The eleventh and twelfth chapters are mainly reprints in French of a discussion with Count Domet de Vorges on the earlier edition of this work; and there are two appendices, reprints of two papers, in French and Italian respectively, on the theory of knowledge and on matter.

Although the whole work is mercilessly diffuse, and curiously out of touch with modern thought, it is an interesting document, representing a movement of which in England we have little experience.

J. L. McIntyre.

Fatti e Problemi del Mondo Educativo. Da Giovanni Calò. Pavia: Mattei Speroni e C. Pp. 270.

In this volume the author has collected a series of essays bearing upon educational theory, and practical educational reform. The opening essay deals with the Science of Education and leads up to able discussions on the possibility of a distinction between philosophy of the spirit and pedagogy, on the modes and limits of educative action on psychical development, on social pedagogy and religious education.

One essay gives a general outline of theoretical and practical reforms, and is followed by a series of papers specially devoted to the reform of the middle or secondary school. Among the subjects taken up in this series are Formal Culture, Classicism and the Cultural School, the reform of the programmes of the primary school both in relation to its own peculiar work, and in its relation to the middle school. The closing essay is an appreciation of the pedagogical achievements of Pasquale Villari.

John Edgar.

Prolegomeni ad una Psicodinamica. Di C. Bivso. Milano, Roma, Napoli: Società Editrice Dante Alighieri di Albrighi, Segati e C., 1912. Pp. 176. Price L. 2.50.

According to Sig. Bivso, we are in need of a new psychology. Hitherto psychology has studied the soul or brain as a thing by itself, whereas in

this world there is no such thing as solitude. The psychology of the future, to which this little book is intended to serve as Prolegomena, will rectify this mistake and will study the brain as a co-existent. It will investigate thoroughly the action of soul on other matter, whether cerebral or non-cerebral. In the meantime it is enough to point out that while most forms of this action, *e.g.* 'moral' influence, hypnotic influence, levitation, are to be explained as examples of 'contact at a distance,' this fact in no way distinguishes the human from the infra-human world. For 'contact at a distance' is a phenomenon of common occurrence in that world too, witness the law of gravitation, molecular cohesion, geotropism, sensitive plants, metamorphic rocks, etc., etc.

W. L. Lorimer.

Beauty and Ugliness: and other Studies in Psychological Æsthetics. By Vernon Lee and C. Anstruther Thomson. London: John Lane, 1912. Pp. xv, 376. Price 12s. 6d. net.

This volume serves a triple purpose: it gathers various essays and notes together round a common theme, it is a biography of rather ill digested views and observations, and it serves as the occasion for a more or less explicit claim to priority.

In the introductory pages, entitled "Anthropomorphic Æsthetics," the reader is introduced to the common theme of the collected papers—"the central discovery of modern æsthetics"—"the projection of our inner experience into the forms which we see and realise". With this discovery the names of Theodor Lipps and Karl Groos and their theories of 'Einfühlung' and 'Innere Nachahmung' are most closely associated. But in 1897 our authors published in the *Contemporary Review* an essay on "Beauty and Ugliness" and they draw the reader's attention to it by reprinting it here (pp. 156-239), showing the parts written by each of them, and adding, in notes dated 1911, indications of changes of opinion and insight which have taken place since the previous date. They are much concerned to show that, in the original essay of 1897, "contemporaneously with the speculations of Lipps and of Groos and in complete ignorance of both," they attempted "to carry the same ideas still further in the direction of psychophysical parallelism" (p. 25).

A claim to priority is quite consistent with the generous recognition of the success and merits of other independent workers. Full of this spirit, Vernon Lee was glad to encounter and welcome Lipps's *Raumæsthetik*, in which, she says, she "instantly recognised the clue to the whole subject". And she became forthwith an enthusiastic disciple of Lipps. But the master was strangely unsympathetic and failed to see the kinship of his ready allies. He denounced their false prophecy and poured out upon them the full vials of his scorn,—in the *Archiv für Systematische Philosophie*, Band iv., 1900. "The cult of organic sensations has become a mania," he cried. "It is impossible that I should in any sort know of the changes in my body, of muscle-tensions, so long as I contemplate a column and am sunk in the enjoyment of its beauty." "A genius like James may be pardoned for spinning out grotesque ideas at his ease once in a while; but it is time the endless spinning out of them were stopped." The effect of this criticism upon Vernon Lee and further notes and discussions are to be found in the paper entitled "Æsthetic Empathy and its Organic Accompaniments," translated from the French of the *Revue*

Philosophique, volume lxiv., 1907. This translation occupies pages 45 to 144 of the present book. The rest of the volume is filled with copious extracts from Lee's *Gallery Diaries* of the years 1901-1904 (pp. 41-350), under the heading "Æsthetic Responsiveness: its Variations and Accompaniments," and it ends with a 'Conclusion' of fifteen pages.

Some idea of the incompatibility of the mind of Theodor Lipps and that of these collaborators may be drawn from the following sentences, which express the insight they have gathered in the eleven or twelve intervening years: "Prof. Lipps's testy criticism on *Beauty and Ugliness*, to the effect that *it is impossible* to be aware of bodily sensations while absorbed in the joyful contemplation of a Doric column, therefore shrinks into mere evidence to an individual incapacity either for self-observation or for such complex impressions as associate in other folk's minds the visual image of the Parthenon columns with the smell of sunburnt herbs on the Acropolis and the tinkle and bleating of sheep that rise from the valley below" (p. 349). "Granted that this empathetically attributed movement and energy are, as Lipps long since pointed out, *abstract*, or as I [*sc.* V. Lee] have called it, residual of countless past experiences, there remains the question: Why should these *ideas of movement*, these abstractions from innumerable memory-images of movement, be awakened in connexion with motionless shapes, and, what is more, awakened in a higher degree and in a very varied manner, by some shapes rather than others? In fact, must there not be in us some *present* movement, however slight, to set going this chain of associations of movement," etc.? (p. 354). "That this actually existing and suggestive movement is largely that of the eyes and of all the bodily parts instrumental in adjusting our sight or affected by such bodily adjustments, I feel more and more inclined to think." "The æsthetic pleasantness and unpleasantness of shapes," on the other hand, Lee believes to be "explicable by the mental process of formal-dynamic empathy, by the interplay of forces suggested by those shapes, and by the pleasantness or unpleasantness of such inner dramas of abstract movement-and-energy-associations" (p. 355).

In æsthetic contemplation the impressions from the object, empathy and all it involves, actual and revived organic and other sensations of individually varying kinds, are undoubtedly present. But it is also true that in æsthetic contemplation, we enjoy the æsthetic object; we do not know of, or enjoy, actual or revived or condensed organic sensations or the like. What is enjoyed must essentially *constitute* the æsthetic object. Experimental æsthetics undertakes the discovery and investigation of all the experiences which enter into, or effect, the realisation of the æsthetic object and its enjoyment. Our authors admire, though they do not follow, this line of work; they prefer the task of wide, occasional, observation and of speculative theory. Lipps may not always have done justice to the claims of analytic, experimental work, but there can be no doubt that he appreciated, as well as perhaps any one, the problem of the coherence of the æsthetic object, the interdependence of all its parts, and the important functions exerted by the stimulative centre of the æsthetic object—the sensory data of impression. Surely our authors have failed to see this problem of coherence, its importance and its essential relation to the problem of empathy. Apart from this failure, the volume is so full of repetitions and of unnecessary and unprofitable talk that it can only have the value of a biographical document.

HENRY J. WATT.

The Dynamic Foundation of Knowledge. By ALEXANDER PHILIP, M.A., LL.B. London: Kegan, Paul, Trench, Trübner & Co., Ltd., 1913. Pp. xii, 318.

This work is an interpretation of experience from the activistic standpoint. It is therefore in line with a tendency which is fashionable in the ranks of present-day philosophers, and still more fashionable among the camp-followers. But Mr. Philip is more than a camp-follower. In 1887 and 1897 he published essays on the nature of matter and energy, in which he maintained that "the scientific concept of energy adequately explains the phenomena of nature, and that the inconsistent concept of material reality should be finally abandoned". These conclusions are used in the present work as a basis for the interpretation of the choir of heaven and furniture of earth.

The book falls naturally into four sections. After sketching his solution of the problem of knowledge, the author reviews the history of metaphysical speculation, and indicates how his theory clears away the mists that hang about the peaks of metaphysics. He then briefly shows that his view is supported by physical science, and finally in a rapid survey explains what new light his doctrine will throw on various departments of knowledge.

Mr. Philip starts with the constant mutation of the sensible world. It is not a world in which things are in constant change. It is itself constant change. In sensation we are aware not of that which changes but only and solely of the change. Matter is only a process of change and motion. In order to find the real and immutable it is therefore necessary to transcend the limits of the world of sense. Reality is "erected for us by an intellectual operation" (p. 10). This erection consists in the system of affirmative judgments actively made by the waking consciousness. Theoretically it is possible to doubt this reality. But practically we must act as if it were true. Thus on the one side we have the 'actual' world of sense. Beyond this phenomenal world the affirmative judgment postulates or erects Reality, which consists solely in Power or Energy.

Even from such a brief outline as this, it is evident to what lines of thought Mr. Philip is chiefly indebted for his eclectic doctrine. His theory does not escape the pitfalls into which every such view has a tendency to fall. In asserting the priority of activity to cognition, the author is involved in a common confusion, the confusion between unconscious power and conscious power. As unconscious power, activity may be prior to cognition, but as conscious power it *eo ipso* involves cognition. In order to secure its priority, Mr. Philip drags in the notion of 'intuition'—the most slippery of all philosophical terms. Further, there is confusion in Mr. Philip's doctrine of the relation of my self and other selves to the fact of activity. Sometimes (*e.g.* pp. 26-27) the notion of my self and other selves is derived by inference from the data of sensible change, in which power is manifested. But, again (*e.g.* pp. 21-22) the postulate of power is erected as an inference from my own immediate awareness of activity. The Cartesian *cogito ergo sum* is replaced by *ago ergo possum*. Hence is derived the idea of power. On the former view my self and other selves are interrelated inferences from the fact of activity or energy. On the latter view the agency of other selves is postulated and inferred on the analogy of the activity of myself. Mr. Philip appears to be aware neither of this confusion nor of the fallacies of the 'analogical' view. It is difficult to see how the concept of power or energy effects the escape of the theory from a fatal dualism. Set up on one side a world of sense which is actual (but not real), and postulate on

the other a world of power which is real (but not actual?), and even the concept of energy will fail to secure a real unity.

In the survey of metaphysics which follows Mr. Philip's sketch of his position, he displays a far from reasoning knowledge of the history of philosophy. He starts so far back as Heraclitus, and takes uniformly peculiar views of the various links in the philosophical development. In general he gives no evidence for his statements. As an example of his methods we may refer to two points in his account of Plato. Plato, we are told, represented the real character of things by *ἰδέα* and the essence of knowledge by *εἶδος*. For this view no evidence is adduced. Now any evidence that Plato did distinguish between *εἶδος* and *ἰδέα* tends rather to invalidate this view: *i.e.* If Plato did distinguish, *εἶδος* means the distinct and definite kind, and *ἰδέα* the notional form. But it is really impossible to draw any sharp line of demarcation. Again, Mr. Philip believes that Plato's failure to solve the problem of knowledge was due to the fact that he gave no place in his theory to the conception of *δύναμις*. But this belief, though commonly held, is demonstrably false. The importance of the conception of *δύναμις* in Plato will be realised by anyone who cares to refer systematically to the passages in which the term occurs.

After having displayed the adequacy of his own view as contrasted with the defects of previous philosophy, Mr. Philip proceeds to show that his theory is supported by modern science. The Real is an "active energetic kinesis" (p. 74). Everything in the world may be reduced to Energy and its manifestations. Reality is itself a constant process of transmutation. To such a view the physico-chemical sciences are infinitely more friendly than they were twenty years ago. In particular, the discovery of radium as an element in which a process of transmutation is taking place has suggested the possibility that the so-called ultimate elements of matter are all undergoing transmutation. But in so far as these sciences still maintain the independent existence of three ultimate forms of reality, matter, energy, and electricity, they certainly do not lend any support to Mr. Philip's theory. This scientific position may prove to be merely another instance of the dogmatism of modern science. But we may at least affirm that it does not seem probable that matter and electricity should be reduced to energy. This would mean that the Cosmos was to be reduced to *one* of its forms or elements. It is difficult to see how the ultimate unity of the universe should be found to be one of the elements within the universe.

In the last section the author applies his general theory in various departments of knowledge. He ranges lightly over such wide and diverse fields as biology and æsthetics, ethics and metrics, dynamics and significs, pædagogy and physiology, economics and geometry. With all respect for Mr. Philip's real synoptic ability, may we suggest that (in spite of Mr. Merz) the days are past when Bacon took all knowledge for his province, and the Admirable Crichton challenged Paris to dispute *de omni scibile?*

G. A. Johnston.

Lettres inédites de John Locke à ses amis Nicolas Thoynard, Philippe von Limborch et Edward Clarke. Publiées avec une introduction et des notes explicatives par M. Henry Ollion, docteur ès lettres, professeur à la faculté libre des lettres de Lyon, avec la collaboration de M. le professeur Dr. T. J. de Boer, de l'Université d'Amsterdam. La Haye: Martinus Nijhoff, 1912. Pp. x, 258.

Professors Ollion and de Boer have rendered a distinct service to the student of Locke, by making accessible in their completeness and editing

these three series of letters to his friends. In addition to the letters themselves, the volume contains a short preface, notices of Thoynard, Limborch and Clarke, and explanatory notes, which throw the necessary light upon the numerous references to persons and books. Its value is further enhanced by an index and bibliographies. Dr. de Boer's share of the work consists of the determination of the text of the letters to Limborch, the notes dealing with them and the account of the Remonstrant Theologian. For the remainder of the volume Prof. Ollion is responsible.

Complete novelty cannot, indeed, be claimed for any of the three sets of letters now published. Of the letters to Limborch the more important were printed, with occasional omissions, among the 'Familiar Letters of Locke to Several of his Friends,' in 1708; while the letters to Thoynard and Clarke, preserved in the British Museum, have been drawn upon by Fox Bourne for biographical purposes. As now published in full the letters to Thoynard, which occupy more than half of the volume, serve to throw light on some sides of the intellectual life of Locke, and illustrate the width and multifarious nature of his interests. The correspondence abounds in references to questions in all departments of the physical sciences, to the mechanical inventions of the day, to books of travel and to publications upon subjects which made a special appeal to Thoynard, such as chronology and biblical history. Among the subjects of common interest questions of a philosophical nature unfortunately found no place. Hence the correspondence fails to furnish us with information, either concerning Locke's reading in this direction, or concerning the development of his own thought upon the subjects dealt with in the *Essay*. Indeed, the chief result in this respect of the publication of the letters in full, is to show that the one important deduction drawn from them by Fox Bourne rests upon an obvious blunder. It was never possible to reconcile the statement that Locke regarded the *Essay* as 'completed' in 1679 with what we know of the progress of his thought at that date; with the clear evidence that large parts of it were written subsequently; with Locke's own account of the time at which it was 'brought into that order' in which it was given to the public; or, with Lady Masham's more emphatic declaration that it was during his retirement in Holland from 1683 to 1689 that 'he had full leisure to prosecute his thoughts on the subject of Human Understanding; a work which in all probability he would never have finished had he continued in England'. Nevertheless the statement, given as a quotation from a letter by Locke, has been repeated by Fraser and others without question. The context, however, shows, as Prof. Ollion points out, that the book which was 'complete' in 1679 was not the *Essay*, but Locke's copy of some portion of Thoynard's *Harmony of the Gospels*.

As has been indicated already, the letters to Limborch here published are the completion of a correspondence already familiar. The most interesting new material consists of an argument for the unity of God drawn from his omnipresence as filling all space. The positions implied are to be found in the *Essay* and elsewhere, but are nowhere else so fully or so emphatically stated. The letters to Clarke are almost entirely of a domestic character. In them we see Locke acting as medical adviser on all questions affecting the health of the family, fighting his own brave battle with disease, and rarely failing to send his 'service' to little Betty Clarke, his child friend, always referred to as 'my wife'. Some slight errors would appear to have been made in the deciphering of this set of letters. Apart from these the book has been produced with commendable care.

James Gibson.

La Pensée Contemporaine. Les grands problèmes. Par PAUL GUALTIER. Pp. viii, 312. Paris : Hachette. 3 fr. 50.

This book discusses, with great clearness and considerable charm of style, many of the subjects with which speculation is busy at the present time. The author agrees in the main with the views of M. H. Poincaré and M. Bergson, but turns the edge of his weapon against M. Charles Lalo and M. Paulhan. "M. Charles Lalo prive, en effaet, l'oeuvre d'art de tout contenu psychologique. L'art n'est, pour lui, qu'une technique, et rien d'autre (p. 161). "Pour M. Paulhan, la morale est un mensonge collectif" (p. 180). To handle such a mass of current problems in so small a compass requires considerable skill, but M. Gualtier may be congratulated on the achievement of his purpose,—"Sous la forme la plus claire, le plus vivante et la plus concise que j'ai pu, j'ai tâché,—en profitant des conquêtes les plus récentes et les mieux établies de la pensée moderne,—sinon d'apporter des solutions, du moins d'indiquer des voies".

ARTHUR ROBINSON.

Philosophie Sociale. Par MADELEINE PELLETIER. Paris: Giard et Brierè. Pp. 146. 2 fr.

We find here recorded the views of "une femme politique" on the formation of opinions, on parties, and on social classes. These do not appear to fall within the scope of this review. But the following will be news to most: "La morale Kantienne de l'impératif catégorique ne vise à autre chose qu'à défendre la propriété contre les sans-propriété" (p. 15). Nor will it encourage the readers of MIND to learn that "en thèse générale, l'ennui croit avec l'intelligence" (p. 48).

ARTHUR ROBINSON.

Psychologie der Kunst : eine Darstellung der Grundzüge. By RICHARD MÜLLER-FREIENFELS. In two vols. Leipzig, 1912.

Students of æsthetics will welcome this attempt to give a systematic account of the psychological processes involved in æsthetic enjoyment and also in æsthetic creation. The book is written in a style which is remarkably clear and easy for an English reader. The whole treatment shows a wide and sympathetic knowledge of the various arts and of the general history of art, and the author includes within his materials information gathered from experimental, ethnological and sociological sources. It is unfortunate, however, that he has not included in the first named some of the most recent important work done by American and English psychologists.

The author asserts his general psychological standpoint to be represented broadly by such writers as James, Ebbinghaus and Höffding, and we have usually found his discussions reasonable and sound from this point of view. The first volume includes a careful analysis of the various types of æsthetic enjoyment and of its intellectual components, and of the part played by feeling and the emotions. A short book on artistic production follows. In the second volume various topics—music, poetry, painting, etc.—are dealt with in some detail.

At the outset the author distinguishes the æsthetic, as that which has its end in itself, from the practical, in which we are concerned with some-

thing beyond the mere activity itself, though he admits that the two are often mingled. Under the term Æsthetic he would include Play, from which Art is distinguished in that this latter can be expressed and "fixed" in an objective form while that is not the case with Play. It would seem, however, that some forms of play are not distinguishable from, say, drama, by this criterion. One must surely introduce a reference to the different mental attitudes.

Herr Müller-Freienfels shows good grounds for questioning whether the highest æsthetic enjoyment is experienced by those who are pre-eminently of the reflective, analytic type. He doubts too the capacity for keen musical enjoyment of those who find music full of "ideas," as represented, for example, in some descriptive programmes.

Whilst maintaining that there is always pleasure in the true æsthetic experience the author fully admits the part played by intermingled pain in intensifying feeling. Only in the "successive" arts however, such as music and fiction, can the artist successfully introduce moments of almost unmixed pain for the sake of contrast.

In the chapter upon music the author, in dealing with the origin and development of music, gives due weight to the influence of the ease or difficulty of production and of the structure of instruments in determining the evolution of music. But in dealing with the origin of harmony he fails to consider Myers's suggestion as to the influence of the relations of successive notes. His observations upon the absence of specific effects of minor and major chords have been confirmed by some recent experiments of the reviewer, and in general the sections on music seem to provide a useful summary of this branch of æsthetics.

The sections on colour would gain from some consideration of the work of E. Bullough in this country, while elsewhere the recent work of Prof. Lillien Martin and of Miss E. D. Puffer deserve fuller treatment.

C. W. Valentine.

Goethe. By Georg Simmel. Leipzig: Klinkhardt & Biermann. Pp. viii, 264.

Philosophic interpretations of poetry are always largely matters of taste. Some people like them, and others do not, and it is to be feared that the former are usually themselves philosophers, and that they do not often appeal to lovers of poetry. At best the procedure is too suggestive of breaking a butterfly upon the wheel, and most of us do not like to see this any the better when the butterfly is big and beautiful. It seems radically unfair to make upon a poet the demands for consistency and system to which a philosopher naturally exposes himself, and profoundly unpsychological to press these demands without regard to the dates and events of the poet's life. More especially does a philosophic contemplation *sub specie æternitatis* seem inappropriate in the case of a poet like Goethe who lived an extraordinarily varied life, and almost openly flaunts the dependence of the feelings and opinions he expresses on his personal experiences. If such career is to be philosophised about at all, the most careful attention to dates and to the biographical background would seem to be demanded. In the whole of Prof. Simmel's book however there is hardly a date, and nowhere an exact reference, and hence it is quite impossible to check his statements. If in addition it is noted that his style is difficult and obscure, with paragraphs often extending over three or four pages, and his polemic against unnamed views about Goethe obscurer still, while no hint is vouchsafed of the plan and purport of the book

beyond the statement of the preface that it asks 'What is the spiritual sense of Goethe's existence in general?' and the confession that an interpretation of Goethe must always also be a self-confession of his interpreter, it will not be hard to infer that the book is '*nicht Jedermann's Sache*'.

F. C. S. Schiller.

Scienza e Razionalismo. By Federigo Enriques. Bologna: Nicola Zanichelli, 1912. Pp. xv, 302. Lire 5.

This book contains the result of seven years' reflexion and criticism, and consists of articles which have appeared in various Reviews,—notably *Scientia*, of which periodical Prof. Enriques is one of the editors,—rewritten and welded into an organic whole. The growing domain of influence of the scientific spirit—rationalism—has roused up an anti-scientific reaction originating from those whose interests are threatened or whose habits are disturbed. And yet it must be granted that the doubts from which this reaction started are not wholly unfounded in reason, since everybody can see the dangers to which an inadequate comprehension of science and the narrow rationalism that accompanies it may give rise. But he who has once accepted the idea of the fundamental equality of men in the presence of reason, and has grasped, on the other hand, the irrevocableness in the extension of scientific ways of thinking, cannot bring himself to oppose vain obstacles to the progressive movement of our civilisation, but will try to help and direct it, and thereby bring about the advent of a wider rational view adapted to satisfy the needs of modern life. Such is the object of Prof. Enriques's book.

The first Part is devoted to giving precision to and maintaining, against the claims of pragmatism, the value of science; and the artistic, moral, social, and political value of science is pointed out.

The second Part is on Rationalism and Empiricism. The history of rationalism is traced from the Eleatic criticism of the Pythagorean doctrines, through the logic and metaphysics of the Eleatics, Plato's theory of ideas, the forms of Aristotle, and Galileo's conception of science, to the metaphysical rationalism of Descartes and Leibniz. Then the proofs of the existence of God with Anselm, Descartes, Spinoza, and Hegel, their criticism by Kant, and the pragmatist value of the ontological proof are discussed, and a short section on judgments of existence in the recent critique of the principles of mathematics is added. The weakness in the position of those mathematicians, we read on page 76, who, like G. Cantor, consider such conceptions as that of the "totality of enumerable series" as given, is shown by the "paradoxes of the theory of aggregates," such as that of the concept of the class (S) of all those classes which are not members of themselves. "These paradoxes are sufficient to refute the admission of a logical existence based on the verbal definition of a totality of which the general term cannot be constructed inductively in thought." Then the use of the principle of sufficient reason in natural science and pure mathematics is shown; its position (p. 100) is not logical but epistemological. Finally, there is a discussion of the English empiricists, Kant's critique of knowledge, and the Kantian *a priori* and non-Euclidean geometry. Then a rational doctrine of the concept is founded, and the objections raised by the English empiricists against the process of mathematics dealt with; and, by the light of this doctrine, the critical problem concerning the possibility of a rational science receives a clear solution, which may be described as experimental rationalism.

The third Part is concerned with the conflict between Rationalism and Historicism, the metaphysic of Hegel, and historical Rationalism and the theory of the social mind; the fourth Part deals with the theory of the State and the representative system; the fifth with philosophical particularism and with positive philosophy and the classification of the sciences; and the sixth with science and religion and the problem of reality.

Prof. Enriques rather frequently misspells names in an irritating way: we read of "Kirkhoff" on page 11, "Shopenhauer" in the index (although the name is correctly spelt on p. 82), "Russel" and "Zarmelo" on page 114, "Maimone" on page 159, and variations on du Bois-Reymond's name on pages 76, 113, 298. Further, Bacon seems hardly ancient enough to be Italianised into "Bacone" (pp. 56, 251), even if "Duns Scoto" (p. 31) be passed. However, much may be forgiven to a man who does not fall into the traditional mistake of spelling Leibniz's name as "Leibnitz". However such mistakes or merits are, of course, of small importance; and we proceed to consider the doctrines of the book.

It is impossible not to admire the broad and sane spirit of scientific synthesis that pervades this book. But perhaps the perception of the great fundamental connexions of things necessitates a disregard of those details which seem so important to a specialist. Indeed, one must conclude that Prof. Enriques himself, from what he says on page 25, recognises that, questions of utility or individual preference apart, there is no difference in value between truths. And, in the second Part, there appear to me, to be some loopholes for criticisms.

On pages 43-46 is given, apparently after P. Tannery,[1] the view that, in spite of their discovery of the incommensurability of the diagonal and side of a square, the Pythagoreans held an atomistic doctrine of space and time, which they considered to be protected from the profane by the above discovery, and Zeno's puzzles were directed against this atomistic doctrine. Prof. Enriques repeats the first two—the Dichotomy and the Achilles—of Zeno's four puzzles, and remarks that the reason why the evident objection that the series of spaces or times considered in these two arguments is a convergent geometrical progression falls to the ground is that we are to reflect that the Pythagorean hypothesis was that there is a least interval of time (for example), and that thus the sum of an infinity of instants must then always be infinitely great.

If I am not mistaken, this account of things will be new to many, at least in England, besides being unsatisfactory. It has usually been supposed that the first three of Zeno's arguments were directed against infinite divisibility and the fourth against atomism.[2] And it was against the idea that Zeno denied motion because the moving object would have to pass through an infinity of positions that Aristotle directed his remark: "But the moving object does not count as it moves". And, in comparatively modern times, the mathematician Leopold Kronecker was of the opinion that, "without the supposition of some discontinuity in the filling of space, no change of position in space—that is to say, motion—is thinkable". Kronecker, then, seems to have thought that Zeno's argument in the Achilles, for example, is valid if we suppose that space is infinitely divisible. That Kronecker denied the existence of irrational numbers is irrelevant in this case, for he knew that the "sum" of an infinite convergent geometrical pro-

[1] *Pour l'histoire de la science hellène*, Paris, 1887.

[2] *Cf.* Russell, *Principles of Mathematics*, Cambridge, 1903, p. 352.

gression with a rational base is rational. Many things seem to have escaped Kronecker's notice; but one simple fact—which would appear to contradict the thesis that the Achilles destroyed an atomism of space or time—he, of course, grasped: the "*sum*" of the terms, after a certain one, of the above convergent series ultimately, that is to say, as the term referred to is chosen later and later in the series, becomes less than any non-zero number, however small. Hence, all except a finite number of terms of the above series represent a total length less than one of the supposed atoms. Zeno, then, did not prove that there must be an infinity of atoms in a finite space.

The treatment on pages 74-76 of existential judgments, culminating in the passage quoted above, ignores the distinction between Being and Existence. If there were an S (if S had Being), we could easily prove that it "exists". The puzzling thing is that the general term and the class S appears to be genuine things; and the attacks given by Prof. Enriques seem to miss the point. *Every* definition is verbal; it concerns symbolism only and serves as basis for nothing except the name. It is mere baptism, and not creation. *No* general term of a logical class is constructed inductively, and there is no reason for accepting only those defined by "mathematical induction".

To wha Paul du Bois-Reymond called "idealism," and which is, according to page 76, "realism" in the scholastic sense, is attributed, on page 114, the "inextricable obscurities and contradictions" of such paradoxes as those of Burali-Forti and Russell, and such pseudo-demonstrations as that of Zermelo of the possibility of well-ordering the continuum. The epithets are now, fortunately, out of date; and, though, of course, there may be a point of view from which the very different considerations of Burali-Forti and Zermelo result, no explanation is given of exactly what this point of view is.

It is true, in a sense, that the paradoxes arise from the supposition of a "totality". But that precision is needed results from the remark (p. 76) that the concept "Aleph-zero"[1] cannot be admitted.

Page 110 would have been, it seems, a good place to point out that modern research into the logical principles of mathematics is, far more than non-Euclidean geometry, fatal to the Kantian thesis that our mathematical conceptions must be schematised in space or time.

However it is probably true that accuracy on the points I have mentioned would, as some people say, "displace the centre of gravity of the work".

PHILIP E. B. JOURDAIN.

L'Infinito. By COSMO GUASTELLA. From vol. iii. of the "Annuario della Biblioteca Filosofica". Palermo: Libreria Internazionale, Alberto Reber, 1912. Pp. 172.

The object of this work is to show that the antinomies (in the Kantian sense) exist; in other words, that the actual infinite is impossible. The solution of the antinomies, says the author, will be, perhaps, the subject of another work (p. 3). The actual and the potential infinite are distinguished, and the latter alone—a variable infinite—is logical (p. 5).

[1] That this conception is "the totality of all enumerable series" is not that of Cantor. It is something like that of Russell.

The "actual infinity" of the parts of a straight line is meaningless (pp. 9-10), the field of the potential infinite is the future (p. 8), and there is no totality with the potential infinite (p. 9). The idea of the actual infinite is that of a series which has no last term but in which beyond each term is given another (p. 16), and the author passes in review the various applications which the human mind has made of this idea to, *e.g.*, the infinity of space, the infinite regress of causes, and the continuity of motion (pp. 17-22). The idea of actual infinity is a consequence of realism, and realism is a consequence of the laws of association of ideas (p. 22). The apparent cases of actual infinities are discussed singly (pp. 23-33); and a contradiction is discovered in that an infinite aggregate may have a one-one correspondence with a part of itself (p. 57). The author's laying bare of the supposed contradiction in the actual infinite by the remark (p. 58) that such an infinite "is both equivalent and not equivalent to a proper part of itself," rests on a confusion between Cantorian "equivalence" (one-one correspondence) and equality (or identity). Of course, aided by this confusion, it is easy to prove that an actual infinite implies that a mile is a metre (p. 105).

Against Bergson, who maintains that the discrete is an appearance, the author maintains (*cf.* pp. 121-123, 129) that reality is essentially discrete and continuity is only a metaphysical chimera. It appears that M. Bergson is in the unhappy position of disagreeing with both finitists and infinitists.

Pages 133 to 172 are occupied with notes which contain fuller accounts of the views of some of the writers whom the author mentions in the body of the book, and others. It is relevant to mention that it has long been recognised that the idea of what is called, for the sake of analogy or picturesqueness, a "variable" finite really assumes an actually infinite class of finite and not variable things. No number is variable: mathematicians, when they want to say something about *any* finite number (*any* member of the infinite class of finite numbers) speak, in this case as in some others, of a "variable finite number".

PHILIP E. B. JOURDAIN.

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VII.—PHILOSOPHICAL PERIODICALS.

Philosophical Review. Vol. xxi., No. 4. **A. W. Moore.** 'Bergson and Pragmatism.' [(1) Bergson, like the pragmatists, has an instrumental theory of knowledge. But he sets out by treating the distinction and relation between immediate and reflective experience, not as functional, indigenous and reciprocal, but as ontological, accidental and moving in one direction. The result is (witness the treatment of spirit and matter, of instinct and intelligence, etc.) that nearly every important category is forced, in his system, to play a double *rôle*. (2) Bergson again comes into contact with pragmatism in his anti-intellectualism. But his intuition vacillates from cognitive to impulsive and back again; while he fails to see that the selection and construction of units and elements in the procedure of science involves the very sort of intuitive appreciation for which he contends and which he seeks elsewhere.] **F. Thilly.** 'The Relation of Consciousness and Object in Sense-perception.' [In cases where a real object is involved, (1) what is the relation between the real and the perceived object with respect to their numerical identity at the moment of perception? Modern realism upholds this identity, and offers novel theories of perception: Montague regards perceived objects as true parts of the material world, but as the intermittent products of the relation between particular organisms and the world; Woodbridge thinks that the organism provides a centre for the interplay and co-ordination of the varied differences in the world without allowing these differences to lose their specific characters. Such theories are open to immanent criticism, while they satisfy the requirements neither of natural science nor of epistemology. (2) What is the relation with respect to the possibility of the existence of the real object at other moments apart from perception? Dewey, Montague and Woodbridge find no difference between the perceived and the unperceived objects. But the fact is that, in perception, the entire self is more or less in action; and we are forced to believe that the mind has something to do with the way in which the object figures in the perceptual situation.] **G. H. Sabine.** 'Descriptive and Normative Sciences.' [Discussion of Husserl. (1) Not even the 'descriptive' sciences rest upon a purely theoretical interest. For whatever may be the motives of the individual thinker, science itself is a social product and a social institution, and is always being judged at the bar of human life. (2) The sciences of the 'absolutely existent' are sciences which, by the nature of their abstractions, regard their subject-matter as made up of timeless entities existing in an eternal row; but even here, the normative character of thought appears in the ideality of the laws which standardise the crude matter of fact. Since in the humanistic sciences the place of valuation is clear, the writer concludes that all sciences are rather normative than descriptive.] Discussion. **W. H. Sheldon.** 'Consistency and Ultimate Dualism.' [Reply to Creighton. The axioms of system and of independence must be applied to these axioms themselves; they must be regarded both as interpenetrating and also as externally conjoined. We are thus able to combine the mutual implication

of idealism and realism with their externality and indifference.] Reviews of Books. Notices of New Books. Summaries of Articles. Notes.—Vol. xxi., No. 5. **O. Ewald.** 'Philosophy in Germany in 1911.' [Contemporary philosophy is trying to reconstruct the universalism of antiquity; yet the synthesis between epistemology and metaphysics—whether in transcendentalism, pragmatism or intuitionalism—is still undiscovered. The author comments on the Bologna Congress, Bauch's *Studien zur Philosophie der exakten Wissenschaften*, Kelsen's *Hauptprobleme der Staatsrechtslehre*, Reininger's *Philosophie des Erkennens*, Kraft's *Erkenntnisbegriff und Weltbegriff*, Vaihinger's *Philosophie des Als Ob*, Lask's *Logik der Philosophie*, and other works.] **A. O. Lovejoy.** 'The Problem of Time in Recent French Philosophy. III. Time and Continuity: Pillon, James.' [Pillon merely eliminates continuity from the idea of time; what remains is, he says, true to experienced duration and succession. Bergson eliminates from the idea all attributes of quantity and number. The author agrees with Pillon that experienced time consists of simple discrete units with no succession or transition directly given or intuited. This view removes the paradox of the simultaneity of the successive; denies that we experience a pure transition not composed of 'states'; and avoids the summation of an infinite series. Bergson's difficulties thus disappear. As for James, we find in his writings three distinct theories of time: the third, which is chiefly emphasised, though it is formally antithetical to the second and irreconcilable with the first, is identical with that of Pillon and the writer.] **G. H. Sabine.** 'Prof. Bosanquet's *Logic* and the Concrete Universal.' [In his new edition, Bosanquet not only gives a finished presentation of the 'concrete universal,' but also criticises adverse doctrines. Yet these doctrines lay stress on phases of the reasoning process which the theory of coherence tends to minimise. Realism, *e.g.* rests its case on the obvious fact that "every problem does have its solution". Pragmatism, again, emphasises the determining *rôle* of the *Aufgabe* in the guidance of the other processes in the thought-complex. And this raises the broader question of the place of selective attention in our experience, a question which Bosanquet neglects. Finally, the coherence theory ultimately breaks down, since it represents truth as an eternal effort to do something which it can never fully accomplish.] **E. L. Schaub.** 'Hegel's Criticisms of Fichte's Subjectivism, I.' [Fichte's fundamental principle has been interpreted as the empirical human ego; as the formal or subjective element in experience; as the principle of critical rationalism; as the abstract ego of pure self-consciousness; as the subjective subject-object; as the principle of a subjectified Spinozism; and as Schelling's principle of identity and Hegel's Idea. Hegel's criticisms, while not excluding the fourth and sixth interpretations, are essentially an elaboration of the fifth.] Reviews of Books. Notices of New Books. Summaries of Articles. Notes. **A. W. Moore.** 'Prof. De Laguna on "The Chicago School"'.

Psychological Review. Vol. xix., No. 3. **E. L. Thorndike.** 'The Curve of Work.' [Criticism, in the light of experiments, of Kraepelin's analysis of the curve of work. On the objective side, (1) two hours or less of continuous exercise of function at maximal efficiency give a fatigue-effect (temporary negative effect curable by rest) of 10 per cent. or less. (2) The permanent practice-effect is much less than that of an equal time distributed in fractions over a week or more. (3) There is a rise of efficiency near the end (end-spurt) of approximately 4 per cent. when the term of the exercise is known. (4) There is great fluctuation during a work-period; but in the case of mental multiplication, addition, marking

words, etc., there are no uniformities explicable by warming-up, spurt after fatigue, spurt after disturbance, habituation, rhythm of attention. The curve of work, freed from daily eccentricities, tends under the author's conditions to be a horizontal straight line. On the subjective side, Kraepelin's analysis of the curve, as the result of a compounding of forces, illustrates the danger of speculative *ex post facto* interpretation; it is "highly improbable in almost every one of its main features".] **C. E. Ferree and G. Rand.** 'Coloured After-image and Contrast Sensations from Stimuli in which No Colour is Sensed.' [Report of experiments suggested by theoretical interest in the Purkinje-Brücke phenomenon, and prompted more directly by the recent work of Thompson and Gordon, Fernald, and Titchener and Pyle. (1) A perceptibly coloured after-image may be obtained from a subliminally coloured stimulus if an unfavourable brightness-quality is fused with the stimulating colour and a favourable one with the after-image colour. In central vision the brightness factor may be regulated either by decrease of general illumination or by modifying the stimulus-colour by objective mixture, contrast, or after-image. In peripheral vision, owing to the increased sensitivity of the retina both to achromatic after-image and contrast, and to chromatic adaptation and after-image effects, the obtaining of the coloured after-images is comparatively easy. (2) It is especially easy to arouse G, GB and B as contrast sensations, when the inducing stimuli are subliminally coloured. Decrease of illumination first obscures R, O, and Y; it also enormously enhances the induction of a contrast colour, and particularly of the colours G, GB and B. (3) The Purkinje-Brücke phenomenon is currently explained both as after-image and as contrast; the writers incline to regard it, with Brücke, as due to an after-image of a previous contrast-sensation; in any case, coloured effects are produced by stimuli in which no colour is sensed. The authors conclude that the whole field of functional connexion between chromatic and achromatic processes deserves further study.] **K. Dunlap.** 'A New Laboratory Pendulum.' Discussion. **E. P. Frost.** 'Can Biology and Physiology Dispense with Consciousness?' [We should ask, not if animals are conscious, but rather if their behaviour indicates consciousising; the consciousising process is all process or change in so far as it involves a reference to the past experience of the animal, and a modification of (otherwise rigid) behaviour in terms of that experience; its recognition, as distinct from conscious state, enables us to reconcile the views of comparative psychologists with those of Bethe, Loeb, von Uexküll, etc.]

Psychological Review. Vol. xix., No. 4. **F. L. Wells.** 'The Question of Association Types.' [Quantitative study confirms the theory of 'association types'. In detail: a certain range of reaction-time seems characteristic of a given individual. In the Kent-Rosanoff experiment, individual differences are more marked in the tendency to common or specialised response than in association-time (extreme ranges 20 : 1 and 4 : 1). Definite fidelity to type appears, further, in the tendency to predicative, super-ordinate, contrastive and internal-objective responses; not in speech-habit reactions. In terms of correlation-measures, fidelity to type ranges between ·73 and ·86 positive.] **J. E. W. Wallin.** 'Experimental Studies of Rhythm and Time. III. The Estimation of the Mid-rate between Two Tempos.' [Experiments with metronome tempos. (1) If a variable is chosen between two fixed extremes (serial procedure), it proves to be less (slower) than the arithmetical mean, but bears no constant relation to the geometrical mean. Accuracy of determination shows considerable individual difference. The process of equating inter-

vals is a matter rather of reflective judgment than of direct sensation. The nearer the extremes, and the farther the variable from the mid-point, the earlier is the judgment formed. (2) If the mid-rate is estimated by tapping, it is again less (slower) than the arithmetical mean, but now lies nearer the geometrical than the arithmetical mean. Individual variations are greater and subjective evaluations less reliable than before. All observers have recourse to secondary criteria, and the judgments are mainly, if not wholly, of the reflective type. Nevertheless, response is prompter and less mediate than in the former method.] **J. E. Downey.** 'Literary Self-projection.' [Introspective reports of fourteen observers on the personal reference involved in the appreciation of poetic fragments read or heard. Self-projection may occur in non-empathic form; the visualised self may be a mere spectator of the imaged scene; and this projection may become empathic by fusion with projected kinæsthetic, tactual or organic imagery. But the kinæsthetic experience need not itself be projected; or, if projected, may fuse with other visual imagery than that of the self. Again, the visual objectification may take form as a person not the self, or as animal or object. Kinæsthesis, objectified or not, may appear without visual accompaniment.] **D. O. Lyon** and **H. L. Eno.** 'A Time Experiment in Psychophysics.' [Electric shocks, applied at wrist and below elbow, fuse for a number of observers at an average objective interval of one-fortieth of a second. On the assumption that the nerve impulse travels even at the low rate of thirty-two miles per second, this time is three times too long. The authors discuss a number of possible explanations, laying most weight upon the view that the first stimulus may monopolise the observer's attention, whereby the apparent time of the second stimulus is set back. On the whole, they incline to think that a time-interval elapses between cortical process and ensuing sensation, and regard this result as bearing upon the doctrine of psychophysical parallelism. Vol. xix., No. 5. **G. F. Arps.** 'Introspective Analysis of Certain Tactual Phenomena.' [If two pressure stimuli are applied successively to a finger tip, the normal stimulus (constant in intensity, varying in duration) subjectively increases as the comparative stimulus (constant in duration, varying in intensity) actually increases. The assimilative effect varies with direction of series (method of limits) and with time-order (norm first is more favourable); it disappears at certain limiting points of the series; there is an optimal period both for normal and for comparative stimulus. Reduction of the stimuli to a momentary duration destroys the assimilation.] **K. Gordon.** 'Æsthetics of Simple Colour Arrangements.' [When large and small colour-masses are together in the field of vision, a peripheral disposition of the large is the more agreeable; and, whether the background is light or dark, brighter colours are preferred near the centre, darker toward the periphery. If central and peripheral masses are equal in size, and if the background is light with a dark frame, a dark colour is preferred at the centre. If colours are of equal brightness, long-wave hues are preferred at the centre. Individual preferences appear, but do not neutralise these uniformities.] **C. E. Ferree** and **G. Rand.** 'An Optics-Room and a Method of Standardising its Illumination.' [Description of a room whose illumination may be varied in small steps from the intensity of a south-exposure skylight to the darkness of a moderately good dark-room. Daylight-illumination is standardised by means of the brightness-induction of the peripheral retina; specifically, by the inductive action of a white screen upon a stimulus of no. 14 Hering grey at 25° in the temporal meridian, referred to an average of measurements obtained on a number of days ranging from light to dark. Illustrative results are given (*a*) of this method of standardisation, with green and blue stimuli, and (*b*) of the methods

usually employed; the former are by far the more accurate.] **J. E. Winter.** 'The Sensation of Movement.' [Repetition and variation of Pillsbury's experiments; determination of liminal elbow-movements, normal and with current through upper and lower arm, elbow, wrist and hand; four speeds were used. A current through the wrist reduces sensitivity as much as a current through the elbow. Introspections with electrical stimulation are scattering; if ether is applied to finger-tips and ball of thumb, the sensation is definitely localised in muscle and tendon. There is, then, no evidence for the view that the articular surface is the seat of the movement-sensation; and as the histologists find no sense-endings there, Pillsbury's reference of the sensation to muscle and tendon may be accepted.] **R. MacDougall.** 'Mind as Middle Term.' [The psychologist's standpoint is subjective but not qualitative, relational but not objective. Consciousness must remain the final point of reference, else the province of psychology is simply divided between physiology on the side of stimulus and biology on the side of reaction. The psychologist must maintain the substantial existence of the mental system as his primary field of work, and its primacy as an interpretative criterion in the treatment of its physical correlations. Habit, e.g., comes into psychology simply in virtue of the necessary relation to the selective and organising activities of consciousness which is predicated of it. Biology stands to psychology to-day as physiology stood a few years ago; and psychology will be enriched by the contact; but it dare not lose sight of its fundamental reference to the forms and values of consciousness.] Discussion. **K. Dunlap.** 'The Case against Introspection.' [Exposition and critique of the theories of James and Stout. There is no evidence for 'introspection' as the observation of 'consciousness'. We might keep the term for the observation of 'inner' facts (feeling, kinæsthesis, coenæsthesis), but it is probably better to banish it from psychological usage.]

American Journal of Psychology. Vol. xxiv., No. 1. **R. Dodge.** 'The Refractory Phase of the Protective Wink Reflex: the Primary Fatigue of a Human Nervous Arc.' [Description of experimental technique. The reflex has a very low latency, averaging 30°; the records show no absolute refractory phase.] **E. O. Finkenbinder.** 'The Curve of Forgetting.' [Experiments with censored nonsense-syllables: 14 observers, 11 intervals (7 within the first 24 hours) between learning (by continuous reading) and relearning. Absence of free reproduction does not mean complete obliviscence; no single type of imagery is distinctly better for learning or remembering; quick learners may remember more than slow; the curve of forgetting resembles that of Ebbinghaus; but, under the new conditions, forgetting proceeds more slowly than Ebbinghaus, and more quickly than Radossawljewitsch found.] **L. J. Martin.** 'The Electrical Supply, and Certain New Additions to the Laboratory Equipment, in the Stanford University Psychological Laboratory.' [Electrical supply; colour mixer; adjustable discs.] **F. L. Wells.** 'Practice and the Work Curve.' [The favourable effect of practice may be considered as an increased reponse to *Anregung*, showing itself (1) as better endurance in the single work-curve (addition test); or (2) as an increasingly favourable effect of the pause (tapping test). In (3), the number-checking test, this effect does not seem to be general.] **T. L. Smith.** 'Paramnesia in Daily Life.' [From a study of forty-five cases paramnesia appears to be reducible to a partial amnesia of the associative processes. One or more impressions may drop out, or associations of time and place may be lost. In the latter event, subjective and objective conditions may be confused, or the detached images may enter

new complexes unrecognised.] **E. K. Strong.** 'A Comparison between Experimental Data and Clinical Results in Manic-depressive Insanity.' [Report based on 16 sets of data (5 tests) from 11 female subjects. To give a sample of the results: depressives (4) are characterised by slowness in cancellation and distraction tests; manic cases (5 out of 6) give in the association test many individual reactions and long times.] **C. A. Ruckmich.** 'The Use of the Term *Function* in English Text-books of Psychology.' [Mind is still considered, in most cases, as an active and purposeful 'organism'. Few writers use the term 'function' consistently.] Discussion. **E. B. Tichener.** 'Professor Martin on the Perky Experiments.' Book Reviews. Book Notes.

The International Journal of Ethics. Vol. xxiii., No. 2, January, 1913. **R. M. MacIver.** 'Do Nations Grow Old?' [The popular notion that nations do grow old and die receives scientific support from the vicious 'social organism' theory of Herbert Spencer. But this notion is superficial and false. The fact that a society lives does not make it necessary that it should die. By 'society' in this paper is meant not a 'partial association' *e.g.* a church or trade-union, but an 'integral community,' one "which is a real focus of social life". The normal complex society in this sense has no birth and no death. History corroborates this. Societies do not die, because their life consists in spirit and will.] **J. Laird.** 'Value and Obligation.' [This paper discusses the relation between two fundamental questions of Ethics—"What do we mean by calling anything good? and, Why ought we to do this or that?" The connexion between these questions is synthetic. 'Good' covers a wider field than Ethics, 'ought' a narrower one. (1) In predicating the adjective 'good' of anything, we imply approval. Approval is an attitude neither of mere feeling nor mere desire. It is a reflective judgment of value, which implies claims of objectivity, universality, impartiality and authority. These claims are not satisfied by feelings or desires, but require cognition. (2) Moral worth, exhibited in the sphere of conduct, implies responsible behaviour and deliberate choice of the morally right or wrong. That which is morally right and that which a man ought to do are one and the same. The notion of obligation is not prior to that of value.] **H. B. Reed.** 'The Combination versus the Consumer.' [Two assumptions are made by the traditional doctrine of the economists that in a competitive system the principle of charging what the goods will bear in an open market brings a fair price. It assumes that there is fair competition and that there is an open market. Neither assumption is justified. It is therefore the duty of the State to determine fair prices, especially where monopolies exist. The fair price should be decided not merely by the judgments of common-sense, but by a scientific calculation of the 'needs of the monopoly'.] **Charles W. Super.** 'Some Weak Points in Ancient Greek Ethics.' [An examination of Greek history and literature discloses many defects in the Greek character.] **J. Dashiell Stoops.** 'The Institutional Self.' [The Self is not to be conceived in Spencer's individualist fashion. In its development we may trace a threefold movement. At first it exists as the 'objective group self'. From this, through reflexion, develops the exclusive introspective inner self. Lastly, the reconstructed social institutional self embodies itself in social institutions. This social self is the goal of evolution.] Book Reviews. Books Received.

Revue de Philosophie. Septembre-Octobre, 1912. 'Religious Experience in Catholicism.' [Under the head of Documents are given four lengthy expositions of the cast of spirituality proper to four Religious Orders, the

Benedictine, the Franciscan, the Dominican, the Carmelite, respectively. These expositions can convey little meaning to one who is not familiar with the members of these Orders actually living. There follow under the head of theory : **J. Pachen,** 'Reflections on the Method of Religious Psychology'; **G. Goyan,** 'Social Expansion of the Love of God'; **J. Maréchal,** 'Certain Distinctive Marks of Christian Mysticism; **H. Pinard,** 'Internal Experience in Catholicism'; Of these, the first and third are highly technical; the second argues the two-fold nature of the precept of charity; the fourth, the untrustworthiness of excited feelings away from formulas of faith.] 1er November, 1912. **P. Duhem.** 'Nature of Mathematical Reasoning.' [In opposition to H. Poincaré 'we think to have sufficiently established that mathematical demonstration is pursued by way of syllogism exactly like any other deductive science.'] **A. Gemelli.** 'Psychology and Pathology.' **M. Sérol.** 'The End of Man According to William James.' [The end, to labour for the salvation of the universe, without assurance that one shall ever see such salvation, or that it ever shall be achieved at all, is ill-adapted to the legitimate aspirations of humanity, is ineffective as a stimulant, and rests on a defective system of empiricism.] **M. Gossard.** 'The frontiers of Metaphysics and the Sciences.' '[It cannot be said that Metaphysics are useless for reading correctly the Book of Nature.']

Revue de Philosophie. 1er Decembre, 1912. **G. Melin.** 'The Family and Evolution' [An exposition of M. Letourneau, *L'Evolution du mariage:* free divorce, as a thing that must come in the name of evolution and science.] **A. Dièss.** 'The Question of Hippocrates.' [Littré and the remark of Plato, *Phædrus*, 270 E.] **Mgr. d'Hulst.** 'Lectures on the Existence of God.' [Summary of Lectures given at the Catholic Institute of Paris in 1881-1882. Principle of Causation. The succession of phenomena is not everything. 'A Law is not a Cause.'] 1er Janvier, 1913. **J. Pacheu.** 'Mystic Love Described and Sung of by Jacopone de Todi.' [Giacomo Benedetti, called Jacopone de Todi from the place of his birth, was a Franciscan poet, A.D. 1230-1306. He lost his young wife by an accident at a dance. Recovering from the shock, he became a friar and an ecstatic bard.] **G. Melin.** 'The Family and Evolution.' [It serves the purpose of a theory to affirm that the human race has been evolved from savagery. Yet not one instance is known to history of a savage tribe civilising itself. Left to himself, the savage is unprogressive, *e.g.*, the pygmies. Where countries have been civilised, it has been by a stronger race coming in and driving out the inferior. The accounts of savages on which writers like Herbert Spencer rest their conclusions are utterly untrustworthy. Savages are not known by cursory acquaintance, but by living with and becoming intimate with each tribe in detail, and publishing results in a monograph. Primitive savagery is not founded on history, nor has primitive promiscuity the warrant of careful monographs. The article is a challenge to the dominant anthropology, and is worth considering.] **J. Bulliot.** 'Is a Change Needed in the Direction of Neo-Scholasticism?' [This the title of an article by A. Gemelli in the *Rivista di Filosofia Neo-Scolastica.* The Italian writer deprecates as uncalled for the attention given to physical science by the Louvain school, thinks that pure Thomism does not need it, but would have Thomism itself pass through Idealism, learn something from Hegel, and go beyond him. His French critic holds St. Thomas and Hegel not to belong to the same line of descent.] **E. Baron.** 'Contemporary English Idealism.' [Green, Caird, Bradley.] 1er Fevrier, 1913. **P. Charles.** 'The Metaphysics of Kantism, the Thing in Itself.' ['The Thing in Itself is real or it is not. If it is not,

it is indistinguishable from Nothingness ; if it is, it is indistinguishable from the phenomenon. All the ambiguity rests in the double meaning of the word real. If it is taken to mean the pure category, it is quite true that the Thing in Itself is real, but it is false that it is indistinguishable from the phenomenon. If it is taken to mean the category schematised by the *degree in time*, it is quite true that the Thing in Itself is indistinguishable from the phenomenon, but it is inexact to say that there is still question of the Thing in Itself.'] **S. Belmond.** 'The Scotist Univocity, its Foundations.' [Univocity here means that something, no matter how indeterminate, can be predicated univocally of God and His creatures. The metaphysical foundation of univocity is the position that the distinction between essence and existence in contingent being is not real, but a distinction of thought.] **P. Gény.** 'How to Present the Definition of Truth.' [A defence of the scholastic definition, *Veritas est adaequatio rei et intellectus.*] 1er Mars, 1913. **J. Toulemonde.** 'The Art of Exercising Authority.' [Practical directions for a young man for the management of a class of boys. At first he must be strict, distant, dignified and somewhat mysterious. His tone of voice should be low, and he must not repeat his commands. When he has conquered, he may relax a little.] **P. Charles.** 'The Metaphysics of Kantism, the Categories.' [The category, void of all content, does not hinder our attaining to the reality in itself. The categories, as general conditions of all being that is thought of, are also general conditions of all being that exists or is possible. Kant is no more a subjective idealist than Aristotle.] **A. Valensin.** 'A Logic of Action.' [Conceivably, acts may imply acts as concepts imply concepts. Analysis of a work of M. Blondel on this subject.] **F. Pradel.** 'About the Method of Immanence.' [The Method distinguished from the pantheistic Doctrine of Immanence. Again M. Blondel and his interpreters, Valensin and de Touquédec.] **J. Le Rohellec.** 'The Theory of Passions in St. Thomas.'

Revue de Philosophie. 1er Avril, 1913. **A. Veronnet.** 'Hypothetical Cosmogonies.' [Kant's Theory of the Heavens, date 1755, anticipates Laplace.] **P. Charles.** 'The Metaphysic of Kantism.' [Space and Time, according to Kant, are not only in the mind, but also in things, not, however, in things as they are in themselves, but in things as they appear to us. A luminous and valuable article.] **A. Dies.** 'Critical Review of History of Ancient Philosophy.' [A bibliography, noticing among others A. Rivaud, 'Researches on Greek Anthropology,' W. Süss, 'Ethos, Studies on Greek Rhetoric,' and eight authors who discuss whether the genuine Socrates appears in Xenophon, Plato, Aristophanes, Aristotle, or the Minor Socratics. Of these L. Robin on the 'Memorabilia' is particularly depreciatory of Xenophon.]—Mai-Juin-Juillet, 1913. This monthly review has for once turned into a quarterly, forming a volume of 440 pages. It bears the title *L'Experience Religieuse dans le Catholicisme*, and is well worth reading. Nearly 200 pages are devoted to Catholic Liturgy, of which those dealing with 'The Society of Jesus and the Liturgy' are of special interest, discussing as they do the bearing of the individualism of the Spiritual Exercises upon the social, liturgical spirit, of which the Benedictine Order in the Church is the great exponent. These are the contents : **A. Brou.** 'The Society of Jesus.' **J. Calvet.** 'St. Vincent of Paul.' **Mgr. Demimuid.** 'The First Ladies of Charity in the Seventeenth Century.' [Mary Gonzaga, Queen of Poland, the Duchess d'Aiguillon, and Mme. De Miramion.] **Mgr. Monestès.** 'The Curé d'Ars.' **J. Darnand.** 'A Converted Savage.' [Mataafa, King of Samoa.] **J. Bainvel.** 'The Inner Life of the

Catholic.' [Incorporation in Christ and the Church.] **J. Pacheu,** 'Mystics Interpreted by Mystics.' **C. Besse.** 'Catholic Religious Singing.' **M. Festugière.** 'The Catholic Liturgy.' St. Vincent, the three French ladies, the Curé (Blessed Jean Vianney), and Mataafa are all admirable pictures. M. Bainvel tells what a Catholic thinks and feels.

Archives de Psychologie. Tome xii., No. 1. **A. Michotte.** 'Description et fonctionnement d'un nouveau tachistoscope de comparaison.' [Detailed account of the tachistoscope recommended in the *Technique* of Toulouse and Piéron, i., 1911. The instrument allows images of different objects to be thrown, by tachistoscopic exposure, upon the same retinal area at any required interval of time.] **G. Luquet.** 'Le premier age du dessin enfantin.' [Children begin by making marks without any idea of delineation. A little later, they read a meaning into the scrawls thus produced; the meaning derives from analogy or from environmental suggestion. They next add details, intended to increase the resemblance of the drawing to the object represented; and they finally draw with intention. In the two cases cited, these four stages appear in the course of the third and fourth years.] **E. Claparède.** 'Un Institut des sciences de l'éducation et les besoins auxquels il repond.' [Recounts the genesis and aims of the Institut J. J. Rousseau, which will be opened at Geneva in the autumn, as a training college for teachers and a centre of educational research. The staff includes the names of Bovet, Claparède, Fehr, Guye, Millioud, Naville; courses will be offered in psychology, didactics, school hygiene, treatment of backward and abnormal children, moral and social education, history and philosophy of great educators, scholastic administration and organisations, etc.; investigations will be undertaken upon the development of the child, individual psychology, the technique and economy of work, methods of teaching, the psychology of the teacher, etc. Rousseau's 'functional' idea of education will be the guiding principle of the institute.] **A. Chojecki.** 'Comparaison de quelques processus psychiques dans l'hypnose et dans la veille' [Comparative experiments upon the repetition of series of numbers, the memorisation of nonsense syllables, and the time of association, made with five subjects, prove that hypnosis tends to reduce intellectual activity. [Recueil des faits: Documents et discussions. **H. Pieron.** 'A propos des phénomènes psychoélectriques.' **W. Radecki.** 'Réponse.' [Claim of priority: criticism and reply.] Bibliographie. [Review of works upon sleep.]

Archives de Psychologie. Tome xii., No. 2. **O. Decroly** et **J. Degand.** 'Observations relatives à l'évolution des notions des quantités continues et discontinues chez l'enfant.' [Review of previous observations; experiments on a little girl from the fourteenth to the fifty-seventh month. The child at first uses the names of numbers in a purely mechanical way; then with a view to seriation, without counting; then for counting. Before she can count, she has an idea of the constitution of groups; and there is a preliminary stage in which she notes simply the presence or absence of objects. The authors show that 'two' is employed numerically earlier than 'one'; they are able to date the first use of 'three,' 'four,' and 'five'; they also trace the understanding and employment (first practical, later speculative) of the question 'how many'? These and other results are conveniently summarised in a two-page chart or table.] **V. Cornetz.** 'De la durée de la mémoire des lieux chez la fourmi "Myrmecocystus cataglyphis bicolor".' [The worker ants appear to possess a visual memory of isolated spots in the immediate neighbourhood of the nest; this memory is, however, weak and fickle,

and thus stands in sharp contrast to the olfactory memory. For the so-called homing instinct, which is really a memory of the axis of equilibrium, the reappearance of a direction, the author prefers Bonnier's term 'sense of attitude' to Piéron's 'muscular memory'. The paper gives a number of tracings, drawn to scale, of the ants' journeys from and to the nest.] **E. Cramaussel.** 'Le sommeil d'un petit enfant: troisième série d'observations.' [Continued from x. 4, xi. 2; account of the sleep of a baby girl in the second six months of her life. (1) *Normal sleep.* In night-sleep, the course of pulse and breathing is slower, gentler, more regular, often shallower; in day-sleep, the movements are more abrupt and irregular, the reactions quicker, stronger, less differentiated. After a careful analysis of the curves, the author passes to the sigh, which he finds to be at once a safeguard and a means to the improvement of sleep. 2. *Experiments.* Stimuli, according to circumstances, have various effects on the sleeping organism: they may 'saturate' it, inhibiting the effect of later stimuli; they may work by summation; they may reinforce one another as if by multiplication; they may act independently, each for itself. The common result is a state of general irritability. Nevertheless, if things have not gone too far, the later sleep is 'consolidated': insensibly, when the stimulation is continuous, after certain reactions (sigh, etc.) if it is discrete. The organism grows increasingly selective; the child is never wholly asleep; and so there is a growing disproportion between the physical importance of the disturbance and the extent of the reaction. (3) *Conclusions.* There are three types of mental activity during sleep. The first is what we may call, for want of a better name, instinctive; it is adaptive and protective. The second involves states which approximate those of the ordinary waking life; but there are differences; affective experiences, *e.g.*, are of brief duration and of circumscribed extent. The third, that of the dream, plays but a small part at this stage of life. There is some evidence, further, that the thought of the sleeper imitates that of the waking life, and profits by its organisation.] Bibliographie. [Review of recent psychology of animals, by E. Claparède.] Notes diverses.—Tom xii., No. 3. **L. Schnyder.** 'Le cas de Renata; contribution à l'étude de l'hystérie.' [History and description of a case of hysteria; treatment and cure. The author thinks that the *rôle* of psychical traumatisms has been exaggerated, and that the mental breakdown is often attributable to an emotional situation of long standing. Psychoananalysis is valuable in certain cases; but it is not indispensable to psychotherapy; and the Freudians run the risk of absolutism. Success in the present instance was largely due to revelations made by way of (automatic) writing; many patients will write more freely than they talk.] **E. Claparède.** 'Les chevaux savants d'Elberfeld.' [Report of a visit to Herr Krall, and description of tests. Trickery is ruled out; explanation by involuntary signs (Pfungst's experiments with von Osten's Hans) is, the writer believes, equally out of the question; the appeal to telepathy or to an unknown sense gives up the problem; there remains the hypothesis that the horse possesses intellectual rudiments, *Anlagen*, which may be actualised by special training. This hypothesis is canvassed pro and con, and we are left with a *non liquet;* decision is impossible in default of systematically controlled experiments. An appendix contains the opinions of other scientific men who have witnessed the performances.] **R. Weber.** 'La faculté de lire est-elle localisée?' [Certain brain-areas may be regarded as organs; their function is stable. But there are also 'centres' or 'areas' which are formed by education, moulded by function itself. When we read, *e.g.*, the nervous route passes from eye to visual cortex, and thence by way of auditory to motor centre; the auditory

centre, owing to our mode of instruction, has the predominance, and we can think only in words. In a case of peripheral blindness, the central paths from visual to auditory centre are intact but unused; reading (aloud) is mediated by touch; destruction of the cortical area for the right arm would render the patient alexic and agraphic. The case carries therapeutic suggestions.] Recueil de Faits: Documents et Discussions. **C. Werner.** 'VIIme Réunion des Philosophes de la Suisse Romande, Rolle, 20 juin 1912.' **M. F. Washburn, E. Claparède.** 'A propos de l'adaptation aux circonstances nouvelles.' [The action of the kitten, instanced in Claparède's study of Bonnet, which jumps on the table for its saucer of milk after being accustomed to drink on the floor, may be explained in mechanistic terms, if we remember that the animal does not analyse the complex of stimuli, but reacts to the total situation. Claparède replies that the instance was not, perhaps, well chosen; but that still a process of choice, determining the intelligence of the reaction, seems to intervene.] Bibliographie. Notes diverses.

Zeitschrift f. Psychologie. Bd. lxi., Heft 1. **W. Poppelreuter.** 'Nachweis der Unzweckmässigkeit die gebräuchlichen Assoziationsexperimente mit sinnlosen Silben nach dem Erlernungs- und Trefferverfahren zur exakten Gewinnung elementarer Reproduktionsgesetze zu verwenden.' [The Ebbinghaus-Müller methods are unsuited to the investigation of the simplest laws of reproduction, since they involve higher processes, *viz.* the voluntary determination of the learner. Introspection shows that learning implies a different attitude from reading; and experiments prove that the method of right associates, with regular instruction, gives three times as many hits as a corresponding method with instruction for free association. In detail the writer concludes that the method of right associates with 12-term series yields elementary associations only if the series are very firmly associated; that it is therefore wise to shorten the series; and that the reduction of 'will' to reproductive terms is a pressing problem.] **M. Rosenberg.** 'Zur Pathologie der Orientierung nach rechts und links.' [The notion of direction is grounded in the position and function of our sense-organs; 'before' is visual, 'behind' is auditory, 'right' and 'left' depend primarily upon differences of muscular, positional and tactual sensations. But the distinction of right and left, in the normal consciousness, has come to be a very complicated matter; and pathology shows various stages of its failure. (1) The patient knows that there are lateral dimensions, and knows that they are of opposite direction; but does not know which is the right and which the left. (2) Sensitivity and localisation are unimpaired, but the patient cannot tell to which side the stimulus is applied (Jones' dyschiria). (3) In cases of brain disease and senile atrophy, the disturbance of orientation may affect the whole body. Two cases are described.] Literaturbericht.—Bd. lxi., Heft 2. **F. Schumann.** 'Untersuchungen über die Wahrnehmung der Bewegung durch das Auge.'—1. **W. Lasersohn.** 'Kritik der hauptsächlichsten Theorien über den unmittelbaren Bewegungseindruck.' [Criticism of the three principal theories of the direct impression of visual movement: those of Exner (that we have a specific sensation of movement, a sort of movement-quality), of Stern (that the impression depends on the factors of changed stimulation, the after-image strip, and ocular movement), and of Linke (that the object is apperceived in one stage, but perceived in others, which still carry the consciousness of present experience; and that there is a simultaneous act of identification). Of these, Linke's is farthest from, Exner's nearest to the truth; if there is no sensation of movement, there is a specific sensory something, which calls for further study.] Literaturbericht.—Bd. lxi., Heft 3 und 4. **M.**

Wertheimer. 'Experimentelle Studien über das Sehen von Bewegung. [A very careful study of the direct visual impression of movement produced by the exposure, at a brief interval, of two differently placed stimuli (horizontal lines above and below, vertical and horizontal, etc.). Various methods were employed for single and for repeated observation; and especial attention was paid to the intermediate phases, between optimal movement-impression and discrete succession or fusion into a resting unit. In these phases it was found possible to dissociate the direct impressions of movement and of identity; to secure separate movements of the two members of the stimulus; to secure movement of the one member, while the other was seen at rest; to get the impression of movement without recognition of the position of one or even of both stimuli; and so on. The effect of attention and of predisposition was also studied. In conclusion the author reviews the theories already proposed (after-image, ocular movement, illusion of judgment, fusion of stimulus-contents, form of combination, attention), and finds them all wanting. He offers a physiological theory of cross-connexion: given two functionally neighbouring areas or points, which are stimulated in quick succession, and there will be a short-circuit of excitation, a specific nervous 'passage' (*ein spezifisches Hinüber von Erregung*) between them; this cross-connexion then shows itself in consciousness as the direct impression of movement.—The course and outcome of the research remind the reader of Wohlgemuth's work on the after-effect of seen movement; this is not mentioned by the author.] **K. Koffka.** 'Eine neuer Versuch eines objektiven Systems der Psychologie; Betrachtungen zu L. Edingers Theorie der nervösen Zentralorgane.' [According to Edinger, the human brain is an organ of three levels: the palæencephalon, or receptive-motor mechanism; the neencephalon, or gnostic-practical mechanism; and the association centres, or organ of intelligence. We may agree with him that the first of these operates, in man and animals, without consciousness. He himself finds no need to attribute consciousness to the neencephalon; and the interaction of this with the association centres is so complex that the question is not easy to decide; yet it seems certain that there is a gnostic-practical consciousness. And if in man, then also probably in animals; though in neither is every gnosis or every praxis attended by consciousness.] Literaturbericht.

Zeits. für Psychologie. Bd. lxi., Heft 5 und 6. **L. J. Martin.** 'Die Projektionsmethode und die Lokalisation visueller und anderer Vorstellungsbilder.' [An elaborate study (pp. 225) of mental imagery. Part i. reports preliminary observations taken by the author's method of projection. Typically, this method consists in the presentation of a visual object (vase, postcard); in the fixation of the object by the observer, with the view of obtaining an image; and in the subsequent projection of this 'image of presentation' or 'memory-image' upon a surface in the neighbourhood of the object. Image and object may thus be compared as regards colour, form, size, plasticity, etc. The method is to be preferred to that of the questionary, since the untrained observer who replies to questions concerning visual imagery may confuse visual knowledge with actual vision, and has no standard for the intensity of his images. Incidentally, the author analyses the Fechnerian memory after-image into positive, after-image and memory-image; fails to find the differences obtained by Perky between memory-image and image of imagination (the methods, however, are very different; institutes on her own behalf a comparison of these two images; and applies the method of projection to certain æsthetic problems, to the study of illusions, to mass-experiments, and to auditory images. Part ii. deals with the localisation of images.

Five sets of visual experiments were performed, in light and dark rooms; and twelve types of localisation were distinguished. These reduce to seven classes: localisation in front of the observer, outside of and within the room; behind the observer; in a separate space, not identical with that in which the object is placed; in the head or eyes of the observer; spontaneously varying localisation; unknown localisation. The origin, content, development, duration and characteristic features of the images, as well as these modes of localisation, are discussed in detail; control experiments are made by the regular method of projection; the localisation of abnormal visual images is compared with that of normal; and a brief note is added on the localisation of non-visual images. The author writes throughout with reference to mental pathology, and pays constant (and usually polemical) regard to previous work. An Appendix summarises the evidence afforded by the experiments for imageless visual-memory and imagination.] **F. Schumann.** 'Notiz.'—Bd. lxii., Heft 1 und 2. **G. Heymans** und **E. Wiersma.** 'Beiträge zur speziellen Psychologie auf Grund einer Massenuntersuchung. vii. Die selektorische Wirkung der Ehe.' [(1) A study of the questionary returns relating to 553 married and 498 unmarried persons of the same generation shows that marriage exerts a selective influence; neither the theory of improvement by marriage nor that of degeneration through celibacy is adequate to the facts. (2) The possessors of attributes already subject to selection are selected on the ground of other attributes in accordance with the principle of Weber's Law. (3) The returns show *per* generation an increase of morally valuable and a decrease of morally reprehensible attributes to the amount of 1 to 1·5 *per cent.*; the figures are of the right order of magnitude.] **O. von der Pfordten.** 'Empfindung und Gefühl.' [Sensations are qualitatively distinct, have relative intensity, and possess also a vital component or vital variable, pleasure-pain. Külpe's arguments for the independence of sensory feeling are not valid; and Stumpf's postulation of affective sensations is unnecessary. Feeling, on the other hand, is always of the same kind, and varies only in intensity; it is, in fact, intensity, the intensity of ideas; and it is relative, not like sensation, to the organism, but to the individuality; it constitutes individuality, and is accordingly psychical or central, not psychophysical. The author makes some terminological proposals, and sharply criticises (with special reference to Stefanescu-Goanga) the Wundtian doctrine that feeling may attach to sensation.] **W. Frankfurther** und **R. Thiele.** 'Über den Zusammenhang zwischen Vorstellungstypus und sensorischer Lernweise.' [The methods of learning (*Einprägung*) that conform to type are the most favourable for retention; they also furnish the subjectively most assured reactions. No relation can be made out between reaction time (or preparedness of memory-ideas for reproduction) and sensory type. The sensory quality of the reproduction is determined primarily by type, secondarily (and perhaps in nonconformity with type) by mode of exposition.] Besprechung. [**O. Selz.** Critique of Michotte and Prüm. *Étude expérimentale sur le choix volontaire et ses antécédents Immédiats*, and reply to Ach.] Literaturbericht. Aufruf. [Formation of a Society for positivistic philosophy.] Das Institut f. angew. Psychol. u. psychol. Sammelforschung. [Notice regarding collection of test-materials, etc.]—Bd. lxii., Heft 3. **A. Fischer.** 'Neue Versuche über Reproduzieren und Wiedererkennen.' [Experiments with nonsense-syllables, designed to answer the question whether and in how far there is an inner relationship between the processes of reproduction and of recognition: 'process' is employed in the technical sense of the Austrian school. The results show that recognition is not necessarily based upon a reproductive process

of any considerable degree of development. A minimal amount of subliminal reproduction may or may not be involved; but even if this is the case, other factors are essential. An apparatus of Witasek's is described, which permits the changing of syllables, while a series is in course of exposure.] Literaturbericht.—Bd. lxii., Heft 4. **K. Groos.** 'Untersuchungen über den Aufbau der Systeme: v., Die radikalen Lösungen.' [See MIND, xxi., 617. The first solution of a dualism is (*a*) its disjunction into two opposed radicalisms. Thus the Cartesian doctrine splits into spiritualism (Berkeley) and materialism (La Mettrie, with changed definition of 'matter'); the will-reason absolute of Schelling splits into panlogism (Hegel) and metaphysical voluntarism (Schopenhauer); the Zeus-Chronos of mythology splits into a static (Eleatics) and a dynamic (Heraclitus) conception of God; the God of Christianity becomes eternal substance (Spinoza) and pure development (Pragmatism); the dualism of good and bad becomes, for the past, the doctrines of original sin and of a golden age (Cynics, Rousseau); for the future, optimism and pessimism. (*b*) In other cases, the radicalism is confined to the one side only of the dualism. Thus, in the matter of a world-principle, the dualism of good and bad may become radical on the side of good: the alternative is a mixed good-bad, hardly a Satan; mechanism is opposed to mechanism *and* teleology, determinism to determinism *and* indeterminism, the many (Pragmatism) to the one *and* the many (Parmenides, Schopenhauer), sensualism (Protagoras) to sensualism *and* intellectualism (Plato, Kant); methodologically, too, psychologism is opposed to a logicism which still falls back upon psychology. The paper ends with a criticism of the position of Cohen and the Marburg school.] Literaturbericht. Anzeige des II. Deutschen Kongresses für Jugendkunde, Okt. 1912.—Bd. lxii., Heft 5 and 6. **W. Koehler,** mit Unterstützung von **Prof. H. C. Warren.** 'Bibliographie der deutschen und ausländischen Literatur des Jahres 1911 über Psychologie, ihre Hilfswissenschaften und Grenzgebiete.' [Three thousand two hundred and two titles, as against 2458 of 1910, and 3202 of the *Psychological Index*. The arrangement of this bibliography is now identical with that of the *Index;* and on the score of titles the *Index* has a slight advantage, since it has added a few references, distinguished by letters. Under these circumstances, it is strange that the *Index* can appear in May, the German bibliography only in October; and it seems that subscribers to the *Zeitschrift* should not be compelled to pay for a bibliography which they procure several months earlier. Even the initials lacking in certain *Index* titles are not supplied by the German compiler.]

ARCHIV F. D. GESAMTE PSYCHOLOGIE. Bd. xxiii., Heft 1 u. 2. **U. Josefovici.** 'Die psychische Vererbung.' [A preliminary survey of the whole field of mental heredity, resulting in the establishment of general psychological principles. The Introduction deals with questions of terminology (*Vererbung* = state transmitted or action of transmission; *Erblichkeit* = state which possesses the proved capacity of transmission), with the writer's programme, and with certain psychological objections. Part I. then discusses biological facts and theories: the use of teleological concepts; the epistemological basis of theories of heredity' with special reference to Darwin, De Vries and Weismann; the inheritance of acquired characters; and the recent work on hybridisation, The writer refers the phenomena of heredity to 'least vital units. under the influence of 'vital forces' (= the interplay of certain physical and chemical energies); he emphasises the need of physiological guidance. As regards acquired characters, there are three possibilities: sudden change of the germ-plasm, leading to germinal selection, sup-

plemented by individual selection; parallel induction; and somatic influence of acquired engrams and their ecphory upon the germplasm. Part II. deals with psychological views and theories: mental inheritance in man (sensation, feeling and emotion, higher mental complexes) and in animals (impulse, instinct); the arguments for and against a comparative psychology. The most important sections are those in which the writer outlines a plan of experimentation. He thinks it possible that psychical processes mendelise, though the law of psychical resultants (creative synthesis) may lead to the appearance of intermediate forms. Part III. sets forth the fundamental principles in terms of which mental heredity may be explained. These are the principle of psychophysical parallelism, and the principle of the continuity of psychical processes or of the conservation of psychical occurrence. The meaning of the term 'psychical' must, for purposes of explanation, be extended to cover processes more elementary than the psychological elements, whether these processes be considered as independent psychical *Anlage* in latent form or as functional manifestation of physiological processes.] **F. Nagel.** 'Experimentelle Untersuchungen über Grundfragen der Assoziationslehre.' [Experiments and introspective observations on certain fundamental points of the modern doctrine of association. On the experimental side we note the following results. The learning of nonsense syllables, which have upon them associations set up in earlier series, is subject to associative inhibition; sense material is free of this influence. With syllables, place association is at least as effective as direct connexion; with sense material, localisation plays but little part. The impression of syllables is quickened by previous use of the components of the series; there is no such effect with sense material. The existence of indirect (skipping) association is very doubtful. With syllables the first reading, with sense material the second reading, has the greatest value for impression; in the former case, the initial and terminal components have an advantage, due in part to place association; in the latter, adaptation is involved. The effect of practice is far greater with the syllables. In distributing readings, attention must be paid to the interval between series as well as to the spacing of groups. On the introspective side we find discussions of place association, of recognition and the feeling of familiarity, and of total impression. Under the heading of Method the writer recommends a simple mode of exposition, adapted to the individuality of the learner; the requirement of trochaic reading does not guarantee a bimembral rhythmisation, and the trochee is not always adapted to the material used.] **E. Schroebler.** 'Bericht über den ersten Deutschen Kongress für Jugendbildung und Jugendkunde zu Dresden am 6. 7. u. 8. Oktober, 1911.' Literaturbericht. [Sammelreferat. Vierkandt on *Psychologische Grundfragen der Mythenforschung.*] Einzelbesprechungen. [Scheinert on Meumann's *Vorlesungen*, I.; Vierkandt on Lehmann's *Aberglaube und Zauberei*; Anschütz on Paulsen's *Pädagogik.*] Referate. Berichtigungen. [Reply to reviewers by Michel and Brunswig.] **R. H. Goldschmidt.** 'Alfred Binet.' [Gives a provisional bibliography.] 'Ueber das Denken der Naturvölker, i. Zahlen und Zahlgebilde.' [In studying the number-concepts of lower races, the investigator must give up his own mathematical ideas, which make all numbers abstract and all number-units equal, and must ask rather how his subjects think in the field of number, what their problems are, how their thinking grapples with the problems. A number may, *e.g.*, carry an intrinsic reference to a certain material; a tribe that 'cannot count beyond three' may be able to deal with large numbers, given a particular arrangement or material or problem. Certain numbers acquire prominence, whether by

ease of unitary apprehension or by their frequent occurrence in nature; certain divisions are predetermined by the character of the whole; primitive arithmetical operations are not necessarily reversible; the number-series need not tend toward infinity; rough counts may replace numerical accuracy; a given number-system may, for various reasons, be unsuited for general application. These and other points are illustrated from savage and civilised usage; and the paper ends with an outline of instructions for the use of the anthropological inquirer.] **R. Mueller-Freienfels.** 'Vorstellen und Denken: zur Kritik der Begriffe von Reproduktion und Assoziation.' [What is usually termed the 'image,' or the 'reproduction of a perception,' is in reality a substitutive symbol, having the same conscious currency, but heterogeneous in kind; there are substitutive sensations, feelings and movements; of the latter, the movements of speech are the most important. There are true visual reproductions, though these differ both in intensity and in quality from the corresponding perceptions; there may perhaps be auditory images; but here the list ends. The biological function of the image is to mediate between perception and word-movement or word-sound; the imaginal idea has also an æsthetic sanction. Sensory memory is the basis of dreaming; motor memory underlies thought. The directive and connective element in our mental life is the imageless set (*Einstellung:* also called 'act,' 'intentional experience,' 'thought') which naturally issues in movement, and which is 'materialised' in the kinæsthetic feeling of activity. Further study of these 'sets,' of the 'consciousness of direction,' will yield psychological results of great value. The writer's psychology of thought leads him to a symbolistic theory of knowledge, which has many points of contact with pragmatism.] Literaturbericht. Kursus und Kongress für Familienforschung, Vererbungs- und Regenerationslehre.

Archiv f. d. gesamte Psychologie. Bd. xxiii., Heft 3 und 4. **G. Anschuetz.** 'Spekulative, exakte und angewandte Psychologie: eine Untersuchung über die Prinzipien der psychologischen Erkenntnis, I.' [Three problems arise in connexion with psychology: the discovery of facts and uniformities; the formulation of methods; and the more general question of the nature, limits and means of psychological inquiry. This third problem leads us to distinguish philosophy, which aims at an 'absolute' knowledge of the essence and being of things, from natural science, which is content with a 'relative' knowledge of their behaviour and interconnexion. Psychology differs from the physical sciences in that personal interests are difficult to eliminate, and the subject-matter is complex and comprehensive; it therefore opens the door to speculation. Characteristics of speculative psychology (Lipps, Cornelius) are difference of individual opinion, insistence on the 'inner experiment,' deductive or maieutic procedure, dogmatism.] **R. Mueller-Freienfels.** 'Beiträge zum Problem des wortlosen Denkens.' [(1) Thought is not necessarily dependent on language. It may be sublinguistic, as in experiences of search (looking round a room for the cause of a noise) or of trying to recall a face. It may be colinguistic, as in gesture, language or musical composition. And it may be superlinguistic, as in intuition or inspiration, the sudden fulfilment of latent predisposition; in this case language offers resting-places for thought, and serves to fix its result; but there is thought that is not linguistic, and a too ready flow of words actually hinders thinking. (2) A sustained course of thought is never wholly pure or imageless; but there are thought-passages which have no imaginal or verbal contents.] **E. Hirt.** 'Über empirisch begründete Bewertung der normalen und pathologischen Handschrift:

Tatsächliches und Prinzipielles.' [Much detailed work must be done before we can even come in sight of a graphology. We must begin with the simple and from that proceed to the complex; we must have recourse to experiment wherever possible; we must study the act of writing rather than its product. It is best to start out from the gross changes of pathology. Abnormalities of writing may be physiological, due to some defect of the physical mechanism; psychophysical, due to change in the working of the mechanism; or psychological. (1) The physiological basis of writing is discussed with reference to tabes dorsalis, traumatic cortical ataxia, Friedreich's disease. 2. Psychophysically the writer distinguishes a motor and a sensory type of writing. Experiments with the Kraepelin writing-balance, on simple rectilinear and curved forms, show that the pressure exerted increases with certain directions of movement, under the influence of rhythm, and at the end of a connected series of movements. 3. These and other results are brought into diagnostic relation with paralysis agitans, dementia paranoides, manic-depressive insanity and hysterical states.] **P. Koehler.** 'Beiträge zur systematischen Traumbeobachtung.' [Study based on some 600 records of the author's dreams. In general, the results confirm those of Hacker (xxi., 1). The chief points of difference are: that relations (especially temporal relations) between the dream ideas often appear in consciousness; that there are in dreaming determining tendencies and 'problems' (*Aufgaben*); that criticism of the dream contents is rather the rule than the exception; that feeling exercises an indirect influence upon the reproductive tendencies of impressions; that moods (especially with strongly æsthetic experiences) are possible; that a printed text of limited extent can be read off; and, on the other hand, that ideas are often unlike the corresponding perceptions of the waking life, and that visual ideas never take on a perceptual character.] **L. Chinaglia.** 'Über subjektive Ausfüllung von Raumteilen im Gebiete der Hautempfindungen: vorlaufige Mitteilung.' [Under certain experimental conditions, outline forms impressed on the skin are perceived as areas. The writer inclines to the hypothesis that the filling depends upon a central process.] **E. Bleuler.** 'Die psychologischen Theorien Freuds.' [Reply to A. Kronfeld (xxii., 2 and 3), who makes a brief rejoinder.] **P. Menzerath.** 'VI^e Congrès belge de Neurologie et de Psychiatrie, Bruges, 30. Sept. und 1. Okt., 1911.' Literaturbericht. **H. Keller.** 'Die Aufmerksamkeitsliteratur im Jahre, 1909.' Referate.

Archiv f. d. ges. Psychologie. Bd. xxiv., Heft 1. **G. Anschuetz.** 'Spekulative, exakte und angewandte Psychologie: eine Untersuchung über die Prinzipien der psychologischen Erkenntnis, II.' [Psychological exactitude is a matter rather of method than of subject-matter. Exact, in this sense, is (or may be) the experimental psychology of the laboratory; the analytical psychology of custom, religion, art; the combined, observational and experimental psychology of defect, derangement, and of exceptional personalities. It follows that psychology must base its laws upon a large number of observations, and must work with highly differentiated concepts. Yet for this very reason it must have its unifying ideas; and one of the most fruitful is Fechner's idea of the 'collective object'. Under its constant aspect, the collective object covers, quantitatively, the laws of intensity, space and time; qualitatively, such things as ideational type, Binet's *vérités de groupe*, the fundamental tendencies of character. Under its variable aspect, it covers phenomena ranging from the simplest cases of practice, fatigue, recuperation, adaptation, to the complex laws of human development and degeneration (child and senile psychology).] **V. Benussi.** 'Stroboskopische Scheinbewegungen

und geometrischoptische Gestalttäuschungen.' [The author first restates his view that the conditions of illusion are, subjectively, a determinate apprehension of form and, objectively, the presence of factors that, with or without the intention of the observer, facilitate that apprehension; and summarises his disproof of the explanations of Brentano, Lipps, Pierce and Lehmann. He then reports a series of stroboscopic experiments, in which variants of the Müller-Lyer figure (expansion, contraction, rotation) and of the Zöllner pattern (rotation) are built up. He finds that apparent movements, such as might be expected from the development of the illusory figure, but have no basis of any kind in the stroboscopic phase-figures, occur whenever there is an unitary apprehension of form, and disappear again when attention is paid merely to the stroboscopic presentment. The theory is thus confirmed.] **F. P. Weber.** 'Über die Verbindung von Hysterie mit Täuschungssucht und die phylogenetische Auffassung der Hysterie als eine pathologische Steigerung (oder Erkrankung) tertiärer (nervöser) Geschlechtscharaktere.' [Hysteria may be regarded as a pathological enhancement or derangement, in either sex, of certain tertiary, *i.e.*, nervous, female sex-characters. Hysterical malingering rests upon an instinct of deception acquired through natural selection by the weaker sex. It is possible that hysterical suggestibility is beneficial to those whose will-power is pathologically defective. The author finds no necessary contradiction between his views and those of Babinski, Freud, Janet.] **R. H. Goldschmidt.** 'Bericht über den V. Kongress für experimentelle Psychologie, Berlin, vom 16-19. April, 1912.' **E. Schroebler.** 'Bericht über die Ausstellung des Institutrs für angewandte Psychologie und psychologische Sammelforschung auf dem V. Kongress für experimentelle Psychologie in Berlin.' Literaturbericht. **C. Seeberger.** 'Zur Psychologie der absoluten und der Programmusik.' [Points out, with reference to Wagner, the difference between the sheerly dynamic effect of absolute music and the dramatic effect of programme music. The latter fails of its right purpose when it leaves the realm of the pictorial.] **E. Waiblinger.** 'Dur und Moll.' [Pear's results do not bear out Külpe's law that a cord fuses better than its inversion if the lower of the two component intervals fuses better than the higher; nor is the law itself adequate to the explanation of major and minor. In fact the major chord is based on a single tonic, while the minor is bicentral.] Referate. **I. Ioteyko.** 'Faculté internationale de Pédologie, Bruxelles.'—Bd. xxiv., Heft 2 und 3. **O. Kuelpe.** 'Wilhelm Wundt: zum 80. Geburtstage.' **G. Anschuetz.** 'Spekulative, exakte und angewandte Psychologie: eine Untersuchung über die Prinzipien der psychologischen Erkenntnis, III.' [The writer now comes to close quarters with the question of method, and decides that in psychology external observation and experiment, on the one hand, and introspection and phenomenology of the inner experience, on the other, are closely interwoven and mutually interpenetrating. Incidentally he prefers the method of tests to the Würzburg methods, and assigns a large part—propædeutic, auxiliary, systematic—to phenomenology. He then turns to applied psychology, which is justified in looking to practical results, without regard to consistency or theoretical foundation. Its chief domain is education, where it joins hands with physiology, pathology, hygiene, ethics; it is also closely related to medicine, though the author is not ready to divorce psychology from philosophy and to relegate it to the medical school. In practice, truly, we must not confuse philosophy with science; but a thorough grounding in both is our best safeguard; and psychological theory takes us direct to theory of knowledge, and so by a short step to metaphysics.] **W. Wirth.** 'Ein einheitliches Präzisionsmass der Ur-

teilsleistung bei der Methode der drei Hauptfälle und seine Beziehung zum mittleren Schätzungswert.' [A methodological paper, largely in mathematical terms ; Fechner's halving of the equal-judgments in the method of right and wrong cases turns out to be justified.] **T. Erismann.** 'Untersuchungen über Bewegungsempfindungen beim Beugen des rechten Armes im Ellenbogengelenk.' [A review of the results of previous work shows that renewed investigation is necessary. Experiments were made to determine the differential limen (special kinematometer ; forms of method of limits) for active and passive movement ; the numerical values are of the same order of magnitude, though the differential sensitivity for active movement is somewhat the higher. Sources of error are carefully worked out, and the introspective reports are summarised ; in active movements muscular sensations play a larger part, and the wrist takes precedence of the forearm. Judgments of extent cannot be referred to judgments of time (duration and rate) ; in active movements the influence of time is very slight, in passive movements it is considerably greater. Introspection of the time-factors shows that these are not naturally regarded in such experiments ; direct and indirect criteria of rate are found ; and rate itself appears as an intensifying or clarifying of the specific impression of movement.] **F. M. Urban.** 'Hilfstabellen für die Konstanzmethode.' Literaturbericht. Einzelbrsprechung. [E. Hirt on Bd. 1, Heft i. of the *Zeits. f. Pathopsychologie*, especially on W. Specht's Introduction.] Referate. **W. Reimer.** 'Berichtigung.' **W. Moede.** 'Erwiderung.'

Zeitschrift für Philosophie und Philosophische Kritik. Band cxlvi., Heft 2, 1912. **A. Eleutheropulos.** 'Die Grundlage der Ethik. **Fr. Maywald.** 'Über A. Meinongs Erkentnistheorie.' **J. Paulsen.** 'Reiz und Emfindung.' **N. E. Pohorilles.** 'Der Vitalismus im Lichte der Prinzipienlehre Eduard von Hartmanns.' Rezensionen, etc. Band cxlvii., Heft 1, 1912. **Paul Schwartzkopff.** 'Sind nur Emfindungen wirklich?' **H. Hegenwald.** 'Die Gottesthatsache.' **Hugo Lehmann.** 'Glaubensbetrachtung und Geschichtsforschung in ihren Prinzipien.' **Peter Petersen.** 'Voluntarismus und Intellektualismus.' Rezensionen, etc. Heft 2. **Gustav Spengler.** 'Das Verhältniss der "Philosophie des Als Ob. **H. Vaihingers**" 'zu Meinongs "Über Annahmen." **Günther Jacoby.** 'Der Amerikanische Pragmatismus und de Philosophie des Als Ob.' **Otto Samuel.** 'Über diskursive Sophismien.' Rezensionen, etc.

Scientia. Rivista di Scienza. Vol. xiii., No. 27, January, 1913. **E. W. Maunder.** 'The Sun-Spots.' [Astronomical details on the cycles of sun-spot activity.] **M. Brillouin.** 'Propos sceptiques au sujet du principe de relativité.' [The theory of relativity ignores the ether, and we cannot do this, because electro-magnetic disturbances, unlike gravitation, require a finite time of propagation. The association of rigidity of the ether with perfect permeability to the motions of electrons or matter is an enigma. To avoid this enigma, the relativists propose to adopt for the electro-magnetic field the abstract and purely algebraic point of view which we adopt, in default of a better one, in gravitation, where we cannot find any velocity of propagation ; then, having taken away every material support for radiant energy, they attribute inertia and weight to this energy. To put at the beginning of the theory the new principle of relativity which is based on a few electro-optical observations, and to extend it to the whole domain of natural science, is not physical but metaphysical.] **M. Smoluchowski.** 'Anzahl und Grösse der Moleküle und Atome.' [Physicists feel a certain discomfort when the

atomic theory is traced back to Leucippus, Democritus, and Lucretius. Modern physics is an exact science, and begins with Daniel Bernoulli (1738). The progress up to quite modern times is shortly described, and the article ends with the remark that hardly has physics attained to the solution of a fundamental problem of atomism when a number of other riddles arise.] **E. Rignano.** 'Che cos'è il ragionamento?' [A psychological study of the simplest and commonest form of reasoning with human beings; in a second article the evolution of reasoning will be considered, and in a third article a study of its higher forms will be made.] **F. Kühnert.** 'Die ideographische Schrift und ihre Beziehung zum Sprachbau im Chinesischen.' [Of great interest in connexion with the analogy of Chinese with modern symbolic logic. The stages in the development of Chinese characters are dealt with, and the pious wish is expressed that, when European civilization spreads to China, the language and writing will remain intact.] **R. Dussaud.** 'Le rôle des Phéniciens dans la Méditerranée primitive.' [The part was a great one from the points of view of both politics, commerce and general culture. The present article is mainly concerned with method: hitherto Phœnician history has been founded by means different from those by which Greek and Roman history has been founded.] Critical Reviews. **G. Marchesini.** 'La modernité des vues pédagogiques de Jean-Jacques Rousseau.' [On Rousseau's *Emile*, and in criticism of Lemaître.] Book Reviews. General Reviews. [**S. Jankelevitch.** 'Nouvelles recherches expérimentales sur le cancer.' **R. Maunier.** 'Quelques ouvrages récents de géographie humaine.'] Review of Reviews. Chronicle. — Vol. xiii., No. 28, March, 1913. **M. P. Rudzki.** 'L'âge de la Terre.' [There are five methods for determining the age of the earth: (1) from geological data; (2) from the theory of the secular cooling of the earth; (3) from data on the salinity of the sea; (4) from the theory of the disintegration of radioactive matter; (5) from G. H. Darwin's researches of the evolution of the moon. However we attack the problem, we always arrive at the conclusion that the earth has a history dating back hundreds of millions of years.] **E. Pringsheim.** 'Temperaturstrahlung und Lumineszenz.' [A technical article.] **G. Henslow.** 'Ecology considered as bearing upon the evolution of plants.' [The word "Ecology" was invented by Haeckel and means the study of plants and animals in their natural state. It is Ecology which everywhere reveals the origin of species by direct or self-adaptation to new conditions of life. This conclusion derived from the study of plant life is equally true for the whole of the animal kingdom.] **F. Oppenheimer.** 'Wert und Mehrwert—I. Teil: Die Monopol-Theorie des Mehrwertes.' [*Cf.* his books: *Theorie der reinen und politischen Oekonomie* (Berlin, 1910, 1911); *Die soziale Frage und der Sozialismus* (Jena, 1912); *Der Staat* (Frankfort, 1909).] **E. Naville.** 'La méthode scolastique dans la science du langage.' [The word "scholastic" is not used in a depreciatory sense; it is defined as a method of argument founded on reasoning and not on facts of observation. In modern times the study of living and spoken languages which are rapidly becoming obsolete has begun. This science of linguistics takes care not to construct, by the help of pure reasoning, theories which are logically sound but are only artificial creations.] **R. Pettazzoni.** 'La scienza delle religioni e il suo metodo.' [In the usual division of the study of the history of religions, non-civilised peoples are put on the same plane as the civilised peoples of antiquity and of modern times; neither the historical method (which refers to time) nor the comparative method (which refers to space) should be exclusively used. We have not to do with two methods which have to walk side by side, but with a unitary conception which is founded on the nature of the

object—the essentially one and definite religious fact—which is the subject-matter.] Critical note. **A. Levi.** 'Le problème de la morale.' [Concerned with L. Limentani, *I presupposti formali della indagine etica* (Genova, 1912).] Book Reviews. General Reviews. **F. Bottazzi.** 'Sur quelques concept fondamentaux de la chimie des colloïdes.' **A. Van Gennep.** 'L'Iliade, poème économique.' [With reference to Walter Leaf, *Troy, A Study in Homeric Geography*, London, 1912.] Review of Reviews. Chronicle. It should be remembered that, with every number of *Scientia*, there is published a supplement containing French translations of all the Italian, German, and English articles.

Rivista di Filosofia. Anno iv., Fasc. 3, 1912. **Giuseppe Tarozzi.** 'Empirismo filosofico.' [Claims for Ardigò's positivism, to which the writer adheres, an outlook no less inspiring and hopeful than that of the systems which have hitherto monopolised the title of idealistic. Empiricism does not exclude researches into the ultimate constitution of the cosmos; and while admitting as probable that these may finally issue in agnosticism, it still leaves good hope that important additions to our knowledge of the inner and outer world may be made on the way.] **A. Faggi.** 'Il pensiero.' [The modern tendency to regard thought as a mere instrument for material ends has been carried too far. While not altogether giving up the Baconian view we should profit by the teaching of Greek philosophy that thought is an end in itself.] **Giuseppe Paladino.** 'Per l'edizione critica della *Città del Sole*, di Tommaso Campanella.' [The celebrated utopia of Campanella, first written in Italian, was afterwards translated into Latin with various alterations by its author, and in addition to these the different manuscripts and editions of the work offer more or less divergent readings, all of which a critical edition has to take into account.] **Ferdinando Belloni-Filippi.** 'Il Paticcasammupada.' [Notes on a recent Italian translation of a Chinese version of a Buddhist Sutta.] **Aldo Mieli.** 'Scienziati e pensatori di Kyrene.' [Herodotus tells us that Kyrene was the seat of a famous school of medicine. It also produced the mathematician Theodorus, the astronomer Eratosthenes, the New Academician, Carneades, and finally the mystical Christian Neo-Platonist, Synesius.] Recensioni, etc.

VIII.—NOTES.

FIFTH INTERNATIONAL CONGRESS OF PHILOSOPHY, 1915.

The First General Circular has been issued, under date March, 1913. The Congress is to be held in London from 31st August to 7th September, 1915, in the buildings of the University. His Majesty the King is Patron of the Congress, Lord Haldane the Honorary President, Dr. Bernard Bosanquet the Acting President, Dr. H. Wildon Carr the Honorary Secretary, and Dr. F. C. S. Schiller the Honorary Treasurer.

The Sections into which it is proposed to divide the work of the Congress are, I. General Philosophy and Metaphysics. II. Logic and Theory of Knowledge. III. History of Philosophy. IV. Psychology. V. Æsthetics. VI. Moral Philosophy. VII. Political Philosophy and Philosophy of Law. VIII. Philosophy of Religion. Presidents are to be appointed of each Section.

The Circular is accompanied by an invitation to those who desire to participate to inform the Committee concerning the papers they propose to contribute.

Communications are to be directed to the Secretary of the Congress, H. Wildon Carr, Esq., D.Litt., More's Garden, Chelsea, London, S.W.

MIND ASSOCIATION.

Prof. K. Dunlap, P.O. Box 153, John Hopkins University, Baltimore, U.S.A., has joined the Mind Association since the printing of the April number of Mind.

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

I.—SOME ANTECEDENTS OF THE PHILOSOPHY OF BERGSON.

The Conception of "Real Duration".

By Arthur O. Lovejoy.

The primary and most characteristic part of M. Bergson's metaphysics may be described—by those who like to label ideas with the names of their historic originators—as resting upon a synthesis of two Cartesian propositions with one Kantian proposition. The Cartesian elements consist, first, in the setting-up of a fundamental antithesis between two kinds of being, "extended things" and consciousness, which are forthwith assumed to have no attributes, save that of possible existence, in common; and second, in the emphasis upon the superior certainty of the existence of consciousness. These two principles of the most influential French philosophy of the seventeenth century serve as more or less tacit presuppositions of the most influential French philosophy of the twentieth century; though from them the later metaphysician causes to sprout conclusions unimagined by his predecessor. That the categories applicable to space and spatial things are essentially alien to that existence which we call our inner life, and *vice versa*—this, throughout the greater part of Bergson's writings, is not so much argued for as taken for granted. And that the reality of the *moi qui pense* is the clear and ultimate truth, with the analysis of the meaning of which philosophy should take its start—this is the initial axiom of *L'Évolution Créatrice*, as it is less explicitly that of the *Essai sur les données immédiates de la con-*

science.[1] "The existence of which we are best assured,"—so run the familiar opening words of the former book—"and the one with which we are best acquainted is incontestably our own. Of all other things we have notions which may be considered external and superficial; but ourselves we know inwardly and profoundly."

Descartes, however, had, after all, relatively little to say about the *moi qui pense.* Psychological descriptions, it is true, he furnishes in abundance. But he makes no such attempt to formulate the one essential attribute of consciousness and to deduce methodically therefrom a metaphysics of inner experience, as he does to formulate the one essential attribute of the things "outside me," and to deduce therefrom a cosmology. It was precisely with this somewhat slighted Cartesian problem that Bergson began his own constructive efforts in metaphysics; he would set forth the immediate deliverances of consciousness about its own fundamental and generic nature. And the general outline of his answer to this question he found in a commonplace of the Kantian philosophy. I do not mean that his hitting upon it was conditioned upon Kant's having first propounded the idea; but it is, none the less, a familiar historical fact that Kant had already propounded it. *Time,* said the Critical Philosophy, is the essential attribute of our empirical subjective existence, the pure "form" of the inner sense, as space is of the external. But when this traditional observation, usually somewhat vaguely apprehended, was definitely combined with the two Cartesian propositions mentioned, it obviously generated a further problem, and in part tended to predetermine the solution. The problem certainly cannot be said to have been neglected by Kant, since the *Kritik der reinen Vernunft* is full of his struggles with it. But he scarcely disengaged it clearly from other issues, or answered it in a way to command general assent. The problem is, of course, that of determining, in turn, what are the attributes of time itself, *as* the form of inner experience; in Kantian terminology, it is the question how the "pure percept" of time stands related to "the categories of the understanding," especially the categories which seem most evidently pertinent to it—the categories of quantity—and how *its* relation to these can be radically differentiated from that of space. Precisely this, then, was Bergson's initial and decisive problem, stated in the language of the philosophies of an earlier age.

[1] The latter writing will hereafter be designed as *DI;* I quote from the second edition, 1898.

The answer[1] which Bergson reached is, of course, familiar to all readers of contemporary philosophy; but it is perhaps advisable to repeat here briefly the essentials of it. It declares that the categories of quantity and number, in any ordinary sense, are pertinent only to space and spatial things; and that time, and therefore consciousness in its true nature, is non-quantitative and without any relation to number. For, it is argued, we can think of the elements of a series or succession as constituting a numerical aggregate only if we represent them as co-existing; we can represent them as co-existing only if we picture them as juxtaposed in space; and consequently, to think of the moments of time as forming a series of distinct and numerable moments is to reduce the temporal to the spatial and to convert succession into simultaneity. In real duration the moments fuse, interpenetrate, in fact are "without reciprocal externality". But our imagination, and, indeed, our ordinary 'intellectual' processes of thought, are bound up with spatial imagery, given over to the habit of thinking in terms of number and quantity, and accustomed to deal with objects of thought conceived as 'outside of' one another. These processes, therefore, if left uncorrected, always misrepresent the nature of time, and, consequently, the nature of reality. The principal task of philosophy, then, is to provide the requisite correction of our ordinary notions of real duration.

Was, now, this account of the nature of time, and of the categories that are properly applicable to inner experience —an account which, on the face of it, has an undeniably paradoxical look—an innovation of M. Bergson's? I shall proceed to show that it was not; that, on the contrary, substantially the same answer to the same problem had been earlier developed, and developed as a deduction from Kant's doctrine, in the two influential French semi-Kantian schools of the nineteenth century: the school of Ravaisson and the school of Renouvier.

1. *Ravaisson's doctrine of time.* That Bergson's philosophy bears a close genealogical relation to that of F. Ravaisson-Mollien has been remarked by a number of his expositors; and some of the elements of the older man's doctrine which anticipated the philosophy of creative evolution have been expounded with generous eloquence by M. Bergson himself, in his memorial discourse before the *Académie des sciences morales et politiques*.[2] But the precise nature of the logical

[1] Formulated first and most fully in the second chapter of *DI.*

[2] *Séances et travaux de l'Académie des sciences morales et politiques*, vol. 161, 1904, pp. 673-708.

affinities and oppositions between the two systems has, so far as I know, never been closely analysed; and the relation between the two with respect to their doctrine of time has apparently not been noted at all.

It was not upon Bergson alone, among recent French thinkers, that Ravaisson exercised a significant influence. To most of the men who began to write philosophy in France in the eighteen-seventies and eighties—and for some during the two preceding decades also—Ravaisson's teaching was a potent formative force. This influence was of such a curiously underground, Arethusa-like sort, that the foreign student of French philosophy would be unlikely to suspect it, were it not for the testimony of some of those who experienced it. Ravaisson wrote very little altogether, and almost nothing on philosophy after 1840, except in connexion with certain official reports which he was called upon to prepare. His most important original work, the *Essai sur l'habitude*, his *thèse de doctorat* of 1838, soon became out of print and comparatively inaccessible.[1] As an academic teacher Ravaisson was active only for a few years. His influence was due to three circumstances: first, to the fact that nearly all of the few things he wrote—including his *Essai sur la métaphysique d'Aristote* (1837) and his *La Philosophie en France au 19e siècle*, originally prepared for the exhibition of 1867—were, or enjoyed the credit of being, masterpieces; second, to the fact that, as president of the committee in charge of the competitive examinations for the *agrégation* in philosophy, he for many years determined the subjects of the theses of the candidates for this degree, and was judge of the theses produced; and finally, to the fact that the chair of philosophy in the *École normale supérieure* was occupied from 1864 to 1875 by an inspiring and persuasive teacher, M. Lachelier, who was an ardent admirer of Ravaisson's philosophical methods, and a sharer of some of his doctrines and his enthusiasms. What Ravaisson was to the young men who grew up at a time when French philosophy was truly being reborn, is indicated in an interesting article published by M. Lionel Dauriac in 1885:—

"About sixteen years ago the *Philosophie en France au 19e siècle* was very much what the *exemplaria graeca* were to the studious youth of the time of Horace. He who was to be our judge, he captivated us by his 'æsthetic virtues,' and the magic of his style won us to his ideas. This enthusiasm was

[1] It was reprinted in the *Revue de Métaphysique et de Morale*, 1894. The essay is hereafter referred to in this paper as *EH:* and the page numbers are those of the volume in which the reprint appears.

almost universal, and it would be an error to imagine that the desire of candidates for success was alone the cause of it. All were eager to be praised by the examiner, not because of his functions, but because of what he was in himself. At that time M. Lachelier taught theoretic philosophy at the *École normale;* . . . and the two philosophers then seemed to be of the same school. . . . The influence of MM. Ravaisson and Lachelier ruined, and ruined for ever, that of Victor Cousin. . . . For the first time since half a century, Descartes, Malebranche, Leibniz, Kant, were presented to us as models of the art of thinking, not as examples dangerous to follow. . . . The two classics admired above all were Leibniz and Kant."[1]

Let us now examine the account of the attributes of time given by Ravaisson in his *Essai sur l'habitude*. He maintains therein, in the first place, the four following propositions which, as we have seen, are fundamental to Bergson's theory of "real duration": (1) that to think of a quantity as made up of distinct elements, or to think of a number, is to represent the parts or units as co-existent; (2) that co-existence in turn, can be represented only in the form of spatial juxtaposition; (3) that, consequently, to think of anything as an "extensive," *i.e.*, a divisible, quantity, is to think of it as spatial; (4) that "*tout ce qui est de l'espace est hors du temps.*" Ravaisson's own expression of these propositions is as follows:—

"The understanding apprehends quantity only under the special and determining condition of the distinction of parts, *i.e.*, only under the form of plurality in unity, of discrete quantity, of number. But the idea of the distinction of parts, in its turn, can be apprehended by the understanding only under the still more particular condition that the parts be separated by intervals. In other words, the understanding represents number only in the form of the plurality of the limits of a continuous quantity. Finally, *continuity can be apprehended by the understanding only under the form of coexistence.* But continuous coexistent quantity is extension. Thus *quantity is the logical, the scientific form of extension; and the understanding represents quantity only under the sensible form of extension*, in the intuition of space. . . . Nothing is distinctly intelligible to us except what we can picture in imagination; we have a distinct conception only of what we can outline before ourselves in an imaginary space." (*EH*, 11, 12; italics not in the original.)

Up to this point, the identity of Ravaisson's ideas with Bergson's doctrine about the relation of the intuition of

[1] *Critique Philosophique*, 1885, 1, 36.

space to the category of quantity, and about the essentiality of both to all distinct conception, is complete. But when we turn to the question about time, we find Ravaisson beginning, indeed, in much the same manner as the later philosopher, but at a critical point giving what appears to be a different turn to the argument. A close scrutiny of this difference will, I think, be found instructive.

How, then, asks Ravaisson, can I think the elements of a succession as a quantity, how can I represent them as a number?

"The parts come one after another, and I must bring them together. Now, the addition of part to part is successive; it implies time. But in time everything passes away, nothing abides. How can I measure this uninterrupted flux, this boundless diffusion of succession—unless by something which does *not* pass, but subsists and perdures? And what can this something be, if not my Self (*si ce n'est moi*)?"

It cannot, argues Ravaisson, be space or anything in space, which constitutes this permanent in or behind time that makes the apprehension of time possible.

"For all that belongs to space is outside of time. In my Self is to be found the substance, at once in time and out of time, which is the measure of change as of permanence, the type of all identity."

In short, Ravaisson has led us back to the Kantian Ego, to the "Synthetic Unity of Self-Consciousness"; and he has led us thereto, though at a strangely accelerated pace, over a familiar Kantian road. He himself appends to the passage quoted a reference to Kant, to show the source of his argument.

Now it will be observed that these remarks concerning time curiously ignore what Ravaisson has been saying, on the same page, with respect to the idea of quantity. They imply, or at least they fail to deny, that the elements of a temporal succession can truly and without falsification be represented as a quantity or number. But if—as the preceding argument had maintained—extensive quantities, in the Kantian sense,[1] can be thought only as co-existent, and if the co-existent can be thought only as extensive—then, to think of the time of inner experience as an extensive quantity is precisely to represent the temporal as spatial, and the successive as co-existent. In other words, to bring real time—not the mathematician's abstraction, but the time that is the form of

[1] *Kr. d. r. V.*, A, 162: "By an extensive quantity I mean one in which the representation of the whole is made possible by the representation of its parts and is therefore necessarily preceded by it".

consciousness itself, the time that is *lived*—under the category of extensive quantity, is to *mis*represent it. To this obvious consequence of his reasonings concerning the relation of space and quantity, Ravaisson, in the *Essai sur l'habitude*, was not wholly blind; in certain passages, one finds him contrasting "the extensive unity of logical or mathematical forms," under which science artificially represents existence, with "the intensive, the dynamic unity of reality". But at best the inference is drawn only in a veiled manner, and in the discussion of the attributes of time, where it was of especial pertinency, it was not drawn by Ravaisson at all. Bergson's *durée réelle* was generated simply by the drawing of this manifest consequence. If—as Bergson habitually assumes—what Ravaisson said about the inter-relations of the notions of co-existence, space, quantity and number, is true, then assuredly time is no quantity in the ordinary sense, and its "parts" are not related to it or to one another after the manner of a numerical aggregate. Hence, the characteristic Bergsonian phraseology about the "indivisibility" of duration, the "interpenetration" of moments, the innocence of the elements of our temporal consciousness of all "reciprocal externality".

But in avoiding the self-contradiction into which Ravaisson fell in the passage from his explication of the notion of quantity to his explication of the notion of time, Bergson fell into another contradiction not less obvious. For, of course, a time without succession is no time; without a series of numerically separate moments, without "distinction of parts" and "reciprocal externality," succession is inconceivable, and the term is indistinguishable from its opposite. So long, then, as Bergson adheres rigorously to the sort of phraseology I have quoted, and means anything definite by it, he obliterates the distinction between the temporal and the eternal, between change and immobility, between a sequence and a *totum simul*.[1] For it is only by the aid of the category of number that either time or anything else can be represented as anything but *mere* unity, a blank *Identität der Identität*. And this is precisely where M. Bergson comes out; or rather, it is one of the two conclusions to which he comes, since he contradicts this view only a little less often and less earnestly than he affirms it. For such an outcome, however, he had, once more, precedent in the metaphysics of Ravaisson; he merely reaches, by following the path which Ravaisson entered and then inadvertently abandoned,

[1] This point has been argued by the writer at length in *The Philosophical Review*, May, 1912.

a point very close to that which Ravaisson reached by his other road.

For, as we have seen, in his observations on the conditions of the possibility of the consciousness of time, Ravaisson finds that such consciousness implies the time-transcendence of the Ego, although not in such a way as to take the Ego out of time altogether. The *Moi* to which he introduces us here is not the mere functional persistence of self-consciousness, which Kant talks about in the Deduction of the Categories and the Refutation of the Paralogisms of Rational Psychology. It has the qualities of the Kantian Noūmenal Ego as well, that supersensible entity which is not more superior to the "form" of the outer than to that of the inner sense; and like the latter, it is not to be too exactingly subjected to the principle of contradiction. It is, as we have seen, a "*substance dans le temps à la fois et hors du temps*". In synthetising the successive moments of experience, "I pass continuously through" those moments, "from one extremity to the other"; yet this movement of the Self through time is without detriment to its supratemporal character. It is a "*mouvement que j'accomplis immobile du sein de mon identité.*" But this, of course, is precisely the one sort of movement—namely, an unmoving movement—that can be supposed to occur in a non-quantitative and indivisible *durée réelle.* Ravaisson's Ego, then, and Bergson's pure duration, are both supratemporal modes of existence, smacking not a little of the *Identitätsphilosophie* of Schelling; but they both are also meant to be temporal, and to reveal to us the very essence of our time-experience. And it is not least in the untroubled assumption that duration can have both characters at once, can be "indivisible and yet moving," that the philosophy of Bergson resembles that of the author of the *Essai sur l'habitude,* and of the Romantic metaphysicians by whom the latter had been influenced.

There is one passage in Bergson's first book in which his argument is plainly connected, not, as it usually is, with Ravaisson's doctrine of the spatiality of all quantity, but with the reasoning about time which the latter writer, as we have seen, incongruously combines with that doctrine. Here the Synthetic Ego appears in Bergson's philosophy *in propria persona.* Bergson, in the passage in question,[1] is replying to the objection that we measure objective time, just as truly as we measure space; which would seem to imply that time like space is a divisible magnitude. If duration cannot be measured, what is it that is measured by the swing of a

[1] *DI.* 81.

pendulum? Bergson answers that strictly speaking there is no such thing as succession, and consequently no such thing as time, in objective space, considered apart from the Ego. "Outside of me, in space, there never exists but one position of the pendulum; for of its past positions nothing remains. But within me, a process of organisation or reciprocal penetration of facts of consciousness goes on, and this it is that constitutes real duration. It is because I perdure in this way, that I am able to represent the past oscillations of the pendulum at the same moment in which I perceive its present movement. But suppress for an instant the Ego which thinks (*le moi qui pense*) these so-called successive oscillations: then there will never exist more than a single oscillation, and consequently there will be no duration." This reversion to the Kantian conception of the time-synthetising Ego, in a form of that conception which is but a slight elaboration of that quoted from Ravaisson, is the more interesting in Bergson because it brings out with especial vividness the congenital doubleness of the nature of his "real duration". *This* argument manifestly declares that the Ego which thinks these successive moments distinguishes them even while persisting through them and transcending them. But on the other hand, of course, we are reminded on the same page that time is indivisible and without number, *sans moments extérieurs les uns aux autres.* The supratemporal character of the Kantian Ego did not, by first intention, imply any such indivisibility. It was often interpreted as meaning that the Ego was not "in" time; but it did not deny that time, with its distinctions of before and after, was in the Ego. It was set up precisely as a means of accounting for the possibility of the experience of these distinctions. When, then, Bergson not only adopts Ravaisson's doctrine of the relation of the ideas of quantity and space, but also his entirely distinct Kantian doctrine of the conditions of the possibility of time-perception, he imports an especially glaring incongruity into his system. Yet it is true that the Kantian Ego historically tended not merely to transcend, but also to "transmute" and "suppress," the distinctions and antitheses of the temporal world; and in so far as Bergson's *durée réelle* does the same it is but a Romantic form of the Kantian Ego *redivivus.*

2. *The Doctrine of Time of Dauriac and Noel.*—Among some of the disciples of Renouvier in the neo-criticist school there is to be found a still closer approximation to Bergson's fundamental arguments and his principal conclusion in his *Essai* of 1889. It is possible that this similarity of doctrine (upon the one point) may be due to the fact that these younger

neo-criticists, like Bergson, had been consciously or unconsciously influenced by the reasonings which we have seen expressed by Ravaisson. But in any case, such conclusions were a natural (though by no means an inevitable) result of the Kantian presuppositions of the school, and of that analytic study of the inter-relations of the "categories" which Renouvier had begun in his *Essais de critique générale.*[1]

In the course of such analyses the question was bound to come up for definite consideration: Precisely in what logical terms are the ideas of space and of time to be differentiated, and, above all, what is the relation of the category of quantity to the forms of the outer and the inner sense respectively? To this question M. Lionel Dauriac addressed himself in an article "On the Notion of Number" in *La Critique Philosophique*, 1882; he gave the question the somewhat picturesque form of an unreal hypothetical case. Suppose there were (as, upon neo-criticist principles, there conceivably might be) a mind destitute of outer sensibility, an *esprit pur affranchi de toute relation avec l'espace, soumis à la seule forme du temps.* Could such a purely temporal and non-spatial consciousness have any ideas of number and extensive quantity at all? Would a mind furnished only with temporal experiences be capable of even the most rudimentary notions of mathematics? These questions Dauriac answered with a decided negative. And in the arguments by which he supported his answer Dauriac expressed certain of the characteristic premisses upon which Bergson based his denial of numerical and quantitative attributes to the "real duration" of inner experience.

Dauriac's article is so little known, and relatively so inaccessible, that I think it worth while to translate without much omission a rather long passage from it:—

"Phenomena are of two sorts. One sort, successive and unextended, are free from the spatial form; the other, successive and extended, are subject to the law of spatiality. . . . Quantities are either extensive or intensive. In which form is the intervention of the idea of quantity most efficacious? that is what we wish to know. Now, that a state of feeling (*passion*) may vary in *degree* is undeniable; but to know that it has increased in intensity is not equivalent to knowing by how many degrees the intensity has been increased. . . . Here is a limit which the mathematical sciences cannot cross. . . . Consequently,—subject to possible correction by

[1] The similarities set forth at large in what follows have previously been briefly referred to in a footnote to an article by the present writer in *The Philosophical Review*, September, 1912.

the future progress of psychophysics—we shall persist in regarding *psychic facts as non-extensive quantities.* And from this alone we ought to conclude that they are less capable than others of aiding the mind in the organisation of the science of numbers. . . . In the order of external realities, I prolong, for example, a given line. This line is everywhere homogeneous with itself, its parts remain, if I may so express it, outside of one another. *In the subjective (psychique) order it is not so; and here, as I think, lies the essential difference between addition of intensity and extensive addition. In the increase of intensity the quantities which are added do not remain outside of one another.* When an emotion increases, I cannot isolate in my mind the quantity which constitutes the increase from the quantity which (according to the psychophysicists) would represent the immediately anterior state. . . . [In this and other cases which are instanced] I do not perceive the two states of consciousness as added to one another, but as merged (*fondus*) one in the other. There is here no extension of a homogeneous quantity, but a fusion, *interpenetration, of two heterogeneous qualities.* To speak strictly, *the notion of quantity whether discrete or continuous cannot be applied to facts of the psychic order,* in the sense ordinarily attached to these expressions. One may, therefore, admit that a mind subject only to the form of time, and innocent of all relation, with space, could not conceive of arithmetical number as the human understanding conceives of it,—as Pythagoras conceived of it. The Pythagoreans were wont to think of number as something apart from space and sensible things. But it was to sensible things that they had first gone to find it; it was by dismembering the *external* reality that they discovered that which they looked upon as the first principle."[1]

The similarity of this to the underlying arguments of Bergson's doctrine, and especially to the reasoning of the first chapter of *DI*, is of the closest. That chapter, too, constitutes an attack upon "the thesis of the psychophysicists" that one state may be said to be a definite number of times more intense than another. It, too, proceeds to the criticism of this thesis by means of analysis of what really occurs in so-called cases of the "augmentation" or "diminution" of a feeling or emotion. It, too, as a result of this analysis arrives at the conclusion that these psychic states are not magnitudes which can be compared as "greater" and "less" and that what is ordinarily called an increase in intensity is not a quantitative addition of homogeneous units,

[1] *La Critique Philosophique*, 1882, II., 322-324; italics not in the original.

but a qualitative progression. Moreover, what seems to me a vagueness or a confusion in Dauriac's argument appears in the form of an illicit transition in Bergson's. Even if one admit, with both, that the difference in feeling-content between moment *A* and moment *B* is not merely the difference between so much of a given kind of thing and more of the same kind of thing, it does not follow from this admission that *A* and *B* as *individual existences* are not temporally external to one another. It does not follow, even if we admit that the intensity which exists at moment *B* "contains" the intensity which existed at moment *A*, but contains it in some non-quantitative manner, as a "fusion" or "interpenetration". For the relation of the magnitude or quality of the content of *A* to the magnitude or quality of the content of *B* is entirely different from the relation of the existential *date* of *A* to that of *B*. Few distinctions are more obvious to common sense than this. But in Dauriac's paper the distinction was apparently disregarded; if it had not been disregarded, there would have been no inference possible from the conclusion that intensities do not differ quantitatively to the generalisation that the category of quantity is not properly applicable to psychic states at all. There would still have remained precisely *the numerical character of the time-sequence itself*, the enumeration of the changes which the *esprit pur*, the purely temporal experiencer, is supposed to undergo. Without such a consciousness of sequence and of change of content, the *esprit pur* could not possess even so much as a temporal experience, but with it he was already furnished with the idea of plurality and thus with the rudiments of mathematical thought. This remark was promptly made by Pillon, in a criticism of Dauriac's argument; though the rest of the thesis of the non-quantitative nature of mental states Pillon adopted and emphasised:—

"For my part, I strongly incline to think that such terms as degree, quantity, even magnitude, when applied to sensations, . . . feelings, . . . emotions, . . . and the like, are purely metaphorical. It is certain that they cannot be taken in any exact sense, which would be a mathematical sense. . . . I incline very strongly to think that the so-called degrees or quantities of a given sensation or feeling are merely specific states of consciousness which resemble or differ from one another."

This thesis Pillon supported by the same (fairly obvious) distinction used later by Bergson[1] to the same end: the external causes or stimuli of our mental states differ quanti-

[1] *DI*, 3-6.

tatively, and by a confusion of ideas, we transfer the attributes of the causes to the effects. But when this distinction is observed, "when I compare the two sensations entirely without regard to their physical antecedents, I only discover resemblance and difference; I do *not* discover any quantitative relation, nor, consequently, any positive or intelligible relation of magnitude".[1]

Now a habitual disregard of the distinction between character of content and date of existence is of the essence of Bergson's mode of argument, also. It is only because of it that the reasoning of the first chapter of *DI* appears to him —as it clearly does appear—to tend to the same conclusions as the reasoning of the second chapter. He constantly speaks as if a proof that the contents and characteristics of successive *moments* of experience "interpenetrate" one another, were the same as a proof that the *moments* interpenetrate, and so constitute "a succession without distinction". He repeatedly, in short, passes from the premiss in which he was anticipated by Dauriac—that psychic states, especially of the affective sort, cannot be regarded simply as multiples of homogeneous units, to the excessive generalisation in which he was anticipated by Dauriac—that "psychic states are without quantity or number". Finally, it will be remembered that Bergson is also fond of putting his doctrine in the form of the same imaginary case of an *esprit pur*. *Un moi ignorant de l'espace*, he observes, would have in its experience no possible source of the idea of plurality (*DL*, 92). We can imagine a mind which had the intuition only of time; it is precisely such a mind which would infallibly know duration as it is, as a succession without distinction free from the falsification which the notion ordinarily receives from our space-infected imagery.[2]

Dauriac's essay gave the start to a discussion which was carried on briskly through several volumes of *La Critique Philosophique;* and the doctrine of the essay was supported and somewhat further elaborated by another writer of the neo-criticist circle, M. G. Noel, in 1883. In his article, the argumentation of the second chapter of Bergson's *Essai* of

[1] *Critique Philosophique*, 1882, I. 383-384.

[2] Upon the principle *litera scripta manet*, M. Dauriac, in reply to an inquiry from the writer, has been good enough to offer no objection to this partial republication of a half-forgotten work of his youth; and he writes that he thinks others can judge more objectively than he concerning its logical affinities and historical relations. He adds, however, that while he considers the conception of "creative evolution" an extraordinarily fruitful one, he would not wish to be regarded—now, at all events,—as subscribing to M. Bergson's account of "real duration".

1889 is as clearly foreshadowed as that of the first is in the article of Dauriac; and the characteristic Bergsonian inference is plainly though somewhat waveringly, drawn. I cite enough to exhibit the principal similarities. "When we count (*nombrons*) a series of successive phenomena, we regard the order of their succession as indifferent. Though they are given one after the other, we deal with them *en bloc, we think them as simultaneous*. Otherwise how would it be possible for them to constitute a number? The series, merely as such, is no number. . . . But in order [thus] to impose upon the terms of a series of events *a fictitious simultaneity* it is necessary for us to possess already the concept of co-existence. *This concept, an integral element of that of number, is bound up with the intuition of space*, just as the concept of succession is bound up with the intuition of time. The former connexion is perhaps less obvious than the latter. Two phenomena may be simultaneous without being juxtaposed in space. For example, an odour and a sound seem to be capable of affecting us at once, without our localising either of them. But it is at least doubtful whether these seeming cases of co-existence are not rather cases of rapid succession. In any event, they can occur only where the two phenomena are heterogeneous. Two homogeneous sensations, if not localised, are indistinguishable. But, now, in the case of number as such, homogeneity of the component units is essential. The co-existence of these units can, accordingly, be given originally only in space (*dans le lieu*)."

Noel continues:—

"The intuition of space is so far from being of no use in the elaboration of the concept of number that one may define space as the condition under which we represent numerical diversity as such. . . . Thus the notion of number is possible only to a mind endowed with both forms of sensibility at once. . . . The elaboration of the concept of number consists precisely in the alternating movement by which the mind brings the content of one of these forms under the other form."[1]

M. Noel, it is true, made a distinction which Bergson does not make. He admitted, what one would, indeed, suppose to be sufficiently obvious, that, since "all psychic existence implies change, a constant passing from one state to another," this "succession of distinct states constitutes a numerable plurality". Bergson on every page admits this by implication; but he does not often say it in plain terms, since to do so would be formally to contradict the doctrine of

[1] *Critique Philosophique*, 1883, I., 33-36.

non-quantitative duration. The admission seems also to conflict with the expressions already quoted from Noel; but he seeks to escape the self-contradiction by his *distinguo*. True, "the mind reduced to the purely temporal form *contains* number. But this does not appear . . . sufficient to settle the question. One would need, it seems to me, to prove, over and above this, that the mind could actually derive the *notion* of number from the succession of its inner states. Number exists *in* the mind; but it does not follow that it would exist *for* the mind." In other words, Noel held—what Bergson constantly denies, but as constantly takes for granted —that inner duration is in *fact* a numerical succession; but he held that this could not become a fact of consciousness until the temporal had been represented as spatial and the successive as co-existent. But by this process, as he too—though somewhat incongruously—insisted, the real nature of that duration is essentially misrepresented, is translated into a form alien to its essence.

The views of Dauriac and of Noel concerning the logical relations of time, space, quantity and number were not adopted by the older leaders of neo-criticism. Renouvier, in a reply to Dauriac's article, refused to admit that a purely temporal consciousness "would contain no idea of arithmetical number". "I see," he wrote, "nothing to prevent a mind of the sort defined from counting its own sensations or acts, or from applying to them the notions of unity . . . and number from which arithmetic springs. Such a mind would not measure time in our fashion, in terms of extension and movement; it would probably not imagine it as *continuous;* but it is precisely on that account that it would try to measure time in a *discrete* fashion, by the number of its homogeneous psychic contents, assumed to be of equal duration. And for just this reason *arithmetical number* would be all the more indispensable to a mind of this sort." M. Pillon, also, with characteristic learning and abundance, controverted the reasonings of Dauriac and Noel in a long series of articles.

But it is of interest to note that all four of the neo-criticist writers who concerned themselves with this problem during the eighteen-eighties agreed at least in emphasising two contentions. They all joined in attacking what they described as "the doctrine of the psycho-physicists" that a "mathematical psychology" is possible. And they all held that the nature of the real succession and duration which constitutes the form of inner experience has been profoundly falsified through the transference to it of the attributes of the "form" of outer sensibility, *i.e.*, of extension. For Renou-

vier[1] and for Pillon[2] this falsification consisted merely in the representation of a discrete magnitude as a continuum; for Dauriac and, somewhat less unequivocally, for Noel, it consisted in the representation of psychic facts, in themselves essentially alien to numerical and quantitative determination, under the forms of quantity and number. Bergson may, then, be said to have been anticipated by the whole neo-criticist school in a preoccupation with the problem of sharply discriminating the spatial from the temporal categories, and in the general idea that our ordinary concept of time, and therefore our ordinary way of thinking about the nature of inner experience, have been perverted through the misapplication of the spatial categories to temporal realities.

I do not, of course, wish by all this to imply any reflexion upon Bergson's originality as a thinker. He may very well have arrived at his conclusions independently. That is a question of chiefly biographical interest, upon which he alone can speak with authority. But aside from any such question, there remain certain definite facts, which the future historian of philosophy ought to bear in mind. These facts it may be well now briefly to recapitulate, for the reader's convenience. Bergson's first, fundamental, and most frequently reiterated metaphysical contention may be summed up in these statements: (1) the primary and most certain reality is of the sort that we best know inwardly, *i.e.*, our own inner, conscious existence; (2) this existence is essentially temporal—it is a process of absolute becoming; (3) the great task of contemporary philosophy is therefore that of determining the nature of this "real" time of inner experience; (4) its nature is habitually misrepresented by our ordinary thought, owing to our habit of thinking of time under the form of space; (5) when this misrepresentation is corrected, it turns out that real time is an existence of which quantitative and numerical attributes cannot be predicated and to which all concepts and presuppositions of mathematical thought are inapplicable. Of these five propositions the first four were held generally by the neo-criticist school, and the third and fourth were especially prominent in neo-criticist writings during the de-

[1] *Cf.* the passage from his criticism of Dauriac, already cited.

[2] *Cf. Critique Philosophique*, 1883, II., 20: "L'intuition extérieure tend . . . à se substituer à tous; elle en fausse l'idée par cette substitution; mais elle en est parfaitement discernable et séparable. . . . Tout ce qu'on peut accorder, c'est qu'elle tient au rapport de succession par une adhérence un peu plus forte et moins facile à rompre." The relation of this aspect of Pillon's doctrine to Bergson's has recently been discussed at length by the writer elsewhere (*Philos. Rev.*, Sept., 1912), and is therefore merely touched upon here.

cade preceding the publication of Bergson's first book. In this school, all four of these doctrines were in fact, and avowedly, developed from certain Kantian principles.

The fifth proposition was of less general acceptance; but it had been enunciated by Dauriac and, with some inconsistencies, by Noel. This proposition with Bergson rested chiefly upon three supports. (*a*) The first was the psychological observation that mental states, notably those of the affective sort, cannot be compared as homogeneous quantities, but only as qualities; and, in particular, that this is true even in those cases in which we are accustomed to speak of the "increase" or "decrease" of intensity of a given feeling. This observation was converted by Bergson into the belief that psychic states "indivisibly interpenetrate" one another; and this in turn, by a confusion of ideas, was transferred from the relations between the content-characteristics of two moments of consciousness to the relations between the existential dates of the moments themselves. But the same observation had previously been made by Dauriac; it had been by him similarly converted into the notion of the "interpenetration of psychic states"; and, by the same confusion of ideas, had been transferred from its original sphere of application to that of the time-relations between the moments of inner experience. (*b*) The second support of the fifth proposition with Bergson is that view about the logical relations between the ideas of number, co-existence and spatial extension which has been more than once summarised in this paper. But this view had been expressed in 1838 by Ravaisson, though its full implications had not been drawn out by him; and it had been fully and clearly expressed by Noel in 1883. (*c*) The third support of Bergson's principal doctrine about duration lies in the belief that it alone enables us to escape the paradoxes of the continuum while at the same time maintaining the irreducible "reality" of time. In the importance which he attaches to these paradoxes Bergson is once more upon neo-criticist ground; but in the precise way in which he uses them—which I have recently tried to show to be a confused and unconvincing way—he is, so far as I know, without precursors.[1]

If it should happen to be the case that M. Bergson was directly influenced towards the acceptance of the fifth proposition by the arguments and example of those who anticipated him in it, I should not regard the fact as a detraction from his merit as a philosopher, but rather as a partial ex-

[1] *Philos. Rev.*, May, 1912.

culpation. For, as I have sufficiently intimated, it seems to me to be a very strange doctrine, resting upon premisses that are paralogisms. But the ideas involved in it may be said to have been "in the air" in French philosophy at the time when Bergson was framing a system; so that they may, to one living in that atmosphere, not unnaturally have seemed less odd and paradoxical than they in fact are. All philosophers at all times have been more or less the victims of current tendencies and current confusions.

Yet upon one point I think some complaint of Bergson's philosophical procedure is not unjustified. Philosophers, not less than natural scientists, are under some obligation to profit by, and to build definitely upon, the labours of their predecessors. Now, the essential assumptions and reasonings of the first two chapters of Bergson's first book had been patiently and searchingly criticised by Pillon half a dozen years before the book was written. To that proleptic criticism of the logical bases of his doctrine of time, Bergson seems to me to have given no serious consideration. He had, as he tells us, before the publication, though after the completion, of the volume, become acquainted with this "remarkable refutation of an interesting article of M. Noel's on the solidarity of the notions of number and space".[1] But he finds in it nothing which leads him to modify his position, since Pillon failed to make "the fundamental distinction between time as quality and time as quantity, between the multiplicity of juxtaposition and that of mutual penetration". If this means merely that Pillon regarded these distinctions as inadmissible, it is merely another way of saying that Pillon's view is not in accord with Bergson's. If it means, as the reader naturally takes it to mean, that Pillon was unfamiliar with the distinctions and neglected to discuss them, it conveys a complete misapprehension of the facts. The doctrine that mental contents differ only qualitatively, and not quantitatively, was not only known to Pillon, but had been accepted by him and, as we have seen, defended by him on grounds similar to Bergson's. Dauriac's application of this doctrine to the time-relations of mental states was equally well known to Pillon, but had been explicitly rejected by him for reasons set forth definitely and at length, and briefly recapitulated as follows:—

"I have replied to M. Dauriac's reasoning by showing that if mental phenomena are incapable of being measured, they are *not* incapable of being counted (*supputation*), and that consequently the idea of number could arise in a *pur esprit*

[1] *DI*, 57 n.

independently of any *measure* of time as well as any measure of intensive quantities ".[1]

I cannot, of course, take the space to summarise all of Pillon's discussion of the ideas shortly afterwards resuscitated by Bergson; but I think it no exaggeration to say that every essential point of the later writer's reasoning about time had been carefully analysed and lucidly refuted by the earlier one.

On the other hand, the later writer seems to have given a consideration that was by no means careful to this criticism. He observes, for example, that " without this distinction (between *le temps qualité* and *le temps quantité*), which is the principal subject of our second chapter, one might maintain, with M. Pillon, that the relation of co-existence suffices for the construction of number." This, however, was not at all what Pillon had maintained. His real contention[2] was that the experience by any mind of the relation of *succession* suffices for the construction of the idea of number; and that, on the other hand, no really temporal experience could conceivably be had by any mind which did not distinguish at least two successive states, or, therefore, by any mind which lacked the rudiments of the idea of number. Consequently, the dozen lines which Bergson thereupon devotes to a reply to Pillon's anticipatory criticism are wholly destitute of pertinency to that criticism. That, neither before the publication of his first book nor at any subsequent time, has he weighed, and given reasons for rejecting, the distinctions and arguments of his predecessor, must, I think, be regarded as a serious omission.

Bergson's system is, of course, compounded of many elements, of unequal degrees of value and of novelty. In a single paper I have found space for the consideration only of the first and most fundamental one. On another occasion I hope to present some inquiries into the antecedents and historical relations of M. Bergson's theory of creative evolution; of his identification of consciousness with memory; of his doctrine that 'the intellect' is exclusively an instrument of action, and incapable of exhibiting to us the nature of reality; and of the species of mysticism which is associated with the latter doctrine.

[1] *Critique philosophique*, 1882, I., 384; also 1883, I., 164.
[2] *Critique philosophique*, 1883, I., 391, 395 *et passim*.

II.—LIFE AND LOGIC.

By H. Wildon Carr.

Mr. Bernard Bosanquet in his Gifford Lectures, *The Principle of Individuality and Value*, has criticised the two fundamental doctrines of M. Bergson's philosophy. The theory of life he declares to be a misinterpretation of the demand for creative initiative, and the theory of intellect, a failure to appreciate the true nature of logical process. Mr. Bosanquet himself holds that not life but "logic, or the spirit of totality, is the clue to reality, value, and freedom"; and that "creative initiative is obviously, under the form of change, what stability and self-maintenance are under the form of duration" (p. 23). And further, Mr. Bosanquet denies that in the theory of the Absolute we are presented with a reality in which *tout est donné*, in which therefore there is no place for initiative, freedom or creation. I propose to examine first, M. Bergson's theory of the nature of the indeterminism of life, and I shall try to show that Mr. Bosanquet's criticism, at least in one important point, rests on a misinterpretation. Secondly, I shall try to show that M. Bergson's account of logical process follows from his theory of the intellect, and that therefore the opposition between his account and Mr. Bosanquet's is not a disagreement of fact but of interpretation. And finally, on the question of the nature of the reality of the Absolute I shall try to show that Mr. Bosanquet's argument, effective as it is against mechanical determinism, yet fails to prove that logic is "creative," in any real and ultimate sense of the term.

In defending M. Bergson's theory, my aim will be rather to compare his principle with the rival principle of Absolutism than to meet Mr. Bosanquet's criticism with direct argument. And my reason for this is that important and fundamental as the difference between the two theories is,—the theory that reality is the Absolute as a concrete, individual, self-subsistent, harmonious and perfect Being, and the theory that reality is Becoming,—there is practically entire

agreement in the way in which the problem is presented. In both theories the world as we know it in our everyday experience is appearance, and the reality has to be sought for; in both, reality is infinite in richness and possibility, and in living experience we are in actual touch with it and know it; in both, this ultimate reality is of the nature of consciousness and not of the nature of a material thing; in both, discursive thought is the ground of contradiction and inconsistency that must find reconciliation in the absolute. But for one, reality is only reached by logical process through contradiction to reconciliation, and for it no form of immediacy is an absolute and reliable datum, while for the other, reality is known immediately in the intuition of life, and thought leads away from and not towards reality.

1. M. Bergson's theory of the indeterminism of life and of its relation to the mechanically determined organism is called by Mr. Bosanquet a guidance theory, and comes with all such theories under the general condemnation that they fail, and cannot but fail, to exclude the energetical principle they ar intended to deny. There is no way in which to conceive a guiding activity unrelated, in the scientific meaning of the law of the conservation of energy, to the mechanical system. Now if I interpret M. Bergson's theory rightly, it is not a guidance theory in the meaning Mr. Bosanquet assumes.[1] In saying this I do not mean to deny that life is manifested in the guidance of the organism, but I do mean to deny that the relation of life to the organism is conceived as a relation of two different kinds of reality, each of which is for itself, but one of which controls or guides the other. As I interpret the theory it is that one and the same reality lived and known from within is freedom, viewed from without is necessity. What we have to explain is how it comes that what is one movement appears as an opposition of two principles. It is this that the metaphysical theory endeavours to do. Let us

[1] Mr. Bosanquet quotes (p. 205) a passage of *Évolution créatrice*, which seems to support his view but which is in my opinion decisive against it. "Supposons, comme nous le faisions entrevoir dans le précédent chapitre, qu'il y ait au fond de la vie un effort pour greffer, sur la nécessité des forces physiques, la plus grande somme possible d'indétermination. Cet effort ne peut aboutir à créer de l'énergie, *ou, s'il en crée, la quantité créée n'appartient pas à l'ordre de grandeur sur lequel ont prise nos sens et nos instruments de mesure, notre expérience et notre science*" (*E. C.*, 125). Mr. Bosanquet has italicised the last part of this sentence in order to show that the discontinuity between the guiding element and the inert mass is really bridged by the notion of inappreciable quantity. But as I read the passage the whole force of the contention is in the words "n'appartient pas," which must be intended literally. I think the context bears this out.

however first look at the problem as it confronts us in science.

In M. Bergson's view the way in which life uses the organism in which it is embodied is by releasing at will the energy which the organism has obtained, directly or indirectly, from the sun. Organised life shows itself in the sudden and quasi-explosive release of accumulations of energy. What is the nature of this releasing activity? Is it, or is it not, an essential part of the mechanism it controls? Clearly if it is part of the mechanism, then, in whatever way we may conceive the manner of its activity, we are not delivered from necessity, we have not discovered a principle of freedom. As I interpret this view, life is not force, it does not supply energy. The difficulty we have to meet would be comparatively simple were it only that the energy is so infinitesimal in quantity that it is undiscoverable and practically negligible. The often-quoted illustrations of the operation of the hair trigger, or the firing of the electric spark to explode the mixture in the cylinder, or the idea of a Maxwell's demon who times the opening and closing of a frictionless shutter, help us only so long as we abstract from every idea of energy in the operation itself. Surely if such a patent fact as life were energetical in its activity, it is incredible that science should be unable to detect it. And moreover if life is a form of energy, then however obscure the manner of its activity, it offers no special problem. But what M. Bergson insists on is that science cannot comprehend life because life is a different order of reality to that order which alone will fit our intellectual frames. The nature of this reality is that it is purely temporal. What then is the nature of the action which takes place at that exact point at which life is guiding or controlling the organism by exploding or retarding the explosion of its stored energy? At that point life is externalising itself in action. There is to outward appearance a dualism, for a pure time existence, memory, seems to be inserting itself into a purely spatial existence, matter. But even were the dualism unreconcilable, it is clear that the relation cannot be energetical because force or energy does not enter into the notion of time. We have only to compare the notion of time with that of any physical thing whatever to see that in its very nature time excludes the idea of force. Take for example the scientific conception of light, infinitesimal though the quantity of its energy is when compared with its sensible manifestation, that quantity is measurable and known by actual demonstration. The pressure of the light wave is supposed by some physicists to account for

the phenomenon of the comet's tail which streams from the sun whatever the direction and velocity of the comet's movement. Is there anything even analogous to this in time? The notion of pressure in time itself is nonsense, and if we speak of time as devouring, gnawing, eating into things we are using metaphors borrowed not from science but from mythology.

The failure of science to comprehend life is not due then to the limitation of science but to a natural disability. Life is real time. Science deals with spatial reality, with things which change, with matter that is moved, not with the change and movement itself. The problem of the relation of life to matter is for this reason ultra-scientific, it can only be explained, if it can be explained, by a metaphysical theory. M. Bergson's theory is that matter and intellect are engendered by life; that life which is pure duration has formed itself into intellect in order to take an external view of the reality it knows immediately in living, and matter is that view of the reality. The purpose of this evolution is itself intelligible, the intellect serves activity. How are matter and intellect engendered? Quite naturally, M. Bergson replies, by the interruption of a tension. He conceives life as a tension, the relaxing or releasing of which is extension or matter. Now without going into the whole theory, what I am concerned to make clear about it is this, that life and evolution are not antecedent conditions of matter and intellect, and the former have not supplied the energy which has passed over into the latter. Activity is *élan de vie*. The relation of life to matter is the relation of the tension of the spring to its release, the release is nothing but the interruption of the tension. If it is urged that even these similies are inconceivable without the notion of energy the reply is that that is because we are trying to express in scientific imagery a fact that is ultra-scientific.

The metaphysical, or at least epistemological, principle that is involved in this view is that we can and do know life in its immediacy. In Mr. Bosanquet's view, on the other hand, the immediate is abstract and fleeting, it cannot therefore be a type of reality. The true type of reality is only found in the concrete universal. In following the logical process of thought we are not leaving reality behind, but advancing to a full, complete, concrete individuality. Now to me the whole point at issue between these two entirely opposed principles of interpretation of the universe can be narrowed down to one simple issue, which can be resolved almost into a question of fact. Is time appearance? If

it is, then clearly Mr. Bosanquet is right when he says that in vain shall we look for reality in the immediate. If reality can be grasped at all by the finite mind it must be *sub specie eternitatis*. On the other hand if M. Bergson has effected a revolution in the philosophical point of view, it is centred on the recognition of the absolute nature of time. It is this alone that justifies the primacy of becoming over being. It is this that gives meaning to the idea of creation, of evolution and of freedom. All reality, if time is absolute, how rich soever with facts accomplished, and with potentiality, is gathered up into present activity. It is because we recognise that in time we have the very stuff itself of reality that life is seen to be wider, fuller, completer than intellect. Here then is the contrast between the two philosophical standpoints. For one, life expresses the fact of present time existence and only in immediacy do we touch reality. Life, as this immediate time existence, is creative. For the other, time is appearance, and not life but logic is creative. The notion of creation is correspondingly different. "Everywhere it is creative Logic, the nature of the whole working in the detail, which constitutes experience and isappreciable so far as experience has value." From the one point of view we see a free creative activity, whose whole reality is in the immediate present, which as an immense impulse carries along with it its past into an open future. From the other point of view we see an unceasingly active thought or logic, seeking ever to reach the reality that exists timelessly in the Absolute. For the one, time is the whole reality, for the other, time is the appearance that the part must assume in abstraction from the whole.

The assertion then that there is freedom in the very heart of things does not mean that somewhere, perhaps within the electron, perhaps beyond the stellar system, there may be a principle of indeterminism, and that in some mysterious way it enters as life into the mechanism of the material universe. There is no limit to determinism, because it is the external view of reality which we call nature, and there is no limit to freedom because it is the whole nature of reality as it lives. Freedom means simply that the universe is open to the movement, change, becoming which is ultimate reality as we know it immediately and intuitively. That same reality when we intellectualise it is complete determination.

2. The method by which the intellect works is, in M. Bergson's view, by seeking similarities, by binding the same to the same, by marking out in the flow of experience systems, chains of sequences, identities that can be reproduced or repeated. It is by this method of viewing reality as a repetition

of identities that the intellect serves its practical purpose. In geometry we see its most complete success, for in that science we deal with abstract space and accordingly obtain therein the most perfect freedom of identity from difference. Geometry is therefore the typical science. In Mr. Bosanquet's view this is a fundamental mistake, and he charges M. Bergson with a total misconception of the nature of logical process. The criticism is peculiarly subtle, and from its point of view is probably unanswerable. "If the function of science is to apprehend 'the same producing the same' the operation of scientific principles in leading to novelty whether of truth or practice is made wholly unintelligible" (p. 36). Every proposition that is not a pure tautology (and a tautology is not a proposition) is the affirmation of identity in difference. It is difference alone that makes possible logical advance, in it lies the very pulse of the movement of thought.

Irreconcilable as these two logical doctrines are when thus placed side by side, the real opposition is in the principle that lies behind each. It is from the principle of the nature of reality and the *rôle* of the intellect that each of the writers has adopted, that his special view of the essential nature of the logical process follows. One thing is certainly clear, that for each the fact is the same—whatever the nature of logical activity there is in reality no identity in the sense of absolute sameness or similarity. In M. Bergson's view there is no real sameness at all, for life is becoming, it is every moment new creation. Sameness is the work of intellect which selects, identity is an ideal which it strives for. For Mr. Bosanquet, identity is the appearance from which thinking sets out, and the ideal for which it strives is the whole as a perfect individual. In M. Bergson's view the intellect is the contraction or concentration of consciousness into an instrument of action. It is not an instrument in the sense of a tool that life has acquired and makes use of; it is the whole life or consciousness narrowed, organised and focussed into an acting centre. It serves life by limiting knowledge. In man this mode of activity has reached, as far as we can judge from our limited outlook, its most notable success. It gives us knowledge of matter, and matter is the form which the flux takes for the intellect. Reality is the flux, intellect takes views of it, contracts by memory the incessantly changing life, marks out periods, creates things, represents space. It spatialises even time. Its success is never complete, but the more abstract its subject the more it is at home, the more perfect is its control. The more rich and full, the more concrete the reality we seek to fit into the frames of our concepts

the less is our success. Therefore it is that geometry, the science of homogeneous space, is the type of successful science, whereas science fails altogether to comprehend life. This is the theory, and from it follows of necessity the view of logical process to which Mr. Bosanquet objects. Now the possibility of prediction is a condition of intelligent action, for intelligent action implies the direction of means to an end. That prediction may be possible the world must be viewed as uniform, as subject to natural law. Natural law means that the same causes produce the same effects, and this involves a view of the universe as a system of repetitions. In taking this view the intellect works an economy, and the mode of its working is by limiting, selecting and excluding. Suppose it were otherwise. Suppose we were at once and directly conscious of the myriad influences that are passing at every moment through every centre of action, suppose we were in this sense omniscient, what would our knowledge be of? Being immediate it could not be knowledge of a perfectly complete individual, it would be knowledge of universal movement in being, and clearly it would be useless for individual action. Therefore it is that the intellect allows only those influences to reach consciousness that concern possible action, and therefore it is that logical process is the binding of like to like, and that science is the apprehending of the same producing the same. The like and the same, the repeated identities, are not the absolute but the intellect's limited view of reality. Science is possible on account of just this limitation. Science is measurement. Reality can only be dealt with by science in so far as it is measurable and so quantitative. Quantitative relations between homogeneous units either exist in their own right or else they are ideally constructed, but without them science is impossible. It is in forming these units, in arranging them in systems in which the elements repeat one another that logical process advances science. The ideal of science is a perfect mechanism.

3. The charge against Absolutism that Mr. Bosanquet devotes himself most earnestly to rebut is that it involves the conception of a reality of which it may be said that for it *tout est donné*. I think he is successful in meeting one form of the difficulty. In a well-known passage, Laplace imagined an ideal calculator to whom the state of the universe at any future moment would be fully known. Mr. Bosanquet argues that this ideal is not only at an infinite distance from practical possibility but that it contains a theoretical defect. The calculation could only deal with quantity and from a merely

quantitative calculation it is impossible to predict the psychical experience that would accompany the physical conditions. Either the imaginary calculator is supposed to stand to the world of mind as a physicist stone deaf from his birth would stand to the world of sound; or else there is included in his knowledge of all forces the respective situations of all beings in the world at a single moment, the full experience of mind and its actual objects. On the assumption of this last supposition would not the calculator be doing more than calculate, would he not in fact be doing the work of intelligence, be undergoing the experience in the fullest sense? This argument is, in my view, quite sound and effective against a charge of mechanical determinism, but it is not determinism in the mechanical sense of science that is charged against the theory of the Absolute. And indeed mechanical determination can only have reference to time, and the Absolute, in Mr. Bosanquet's view, is timeless. But the very same argument, used by M. Bergson (in the last chapter of *Les Données immédiates*), derives its whole force from the insistence on the fact that real duration,—time as it constitutes psychical experience, not the spatialised time of science,—is absolute. The astronomer predicting an eclipse deals with time as a homogeneous medium, bare of quality. He spatialises time and can therefore embrace indefinite periods in one mental concept. But to be able to predict what a conscious individual will do at any future moment, the calculator must know what the character of the individual will be at that moment, and to know this he must know the real duration through which the individual will live. He cannot contract or schematise the experience which forms the character which determines conduct. The knowledge necessary to predict the behaviour of a moral agent, were it possible to possess it beforehand, would require just as long a time as it would take to form the character, right up to the moment of action. To know a person's character like this would be indistinguishable from living it, and in what time could that knowledge occur?

The spatialised time of science is appearance alike in M. Bergson's view and in Mr Bosanquet's, the real issue is between the two principles as to the nature of the Absolute. Is it timeless or is it time? If Mr. Bosanquet is to rebut the charge of *tout est donné* he must show that in logic we have not only speculative but real activity, an activity that creates. Logic may show the necessity of the Absolute, and from its necessity affirm its existence. It does not create the Absolute. What may be and must be surely is, Mr. Bradley tells us.

But the Absolute whose existence logic affirms is not awaiting completion. Logic may be the "spirit" of the totality working in the part, but it adds nothing to the whole, it does but reveal its nature. And though the Absolute is experience, it is not experience as it develops in time, but as the totality of a perfect individual, self-subsistent and eternal. Degrees of reality are not themselves absolute but approximations to a type, the reality which exists ideally in the Absolute. It is in this sense that in the Absolute all is given, that for it freedom is appearance.

I have not touched on the question of Value. It is easy to understand Mr. Bosanquet's enthusiasm for the Platonic type of Being as the principle of Value—who indeed does not feel drawn towards it?—but surely it contains a theoretical defect. It is impossible to reconcile it with a real time process. The freedom that is affirmed in the view that time is absolute and not appearance, that reality is creative life, may perhaps be no ground for confidence in human or any other progress, but it does escape this defect. It does not set before us a reality to which we can add nothing, a perfection eternally complete.

III.—IDEALISM AND THE REALITY OF TIME.

By Hugh A. Reyburn.

Idealism postulates that reality is a single system, so that it is possible to pass from any point in it to the standpoint of the whole. If the implications of any part of experience were developed fully we would be led inevitably to the entire system within which this part has its being and significance. The intention of this paper is in a sense a defence of the reality of time against certain methods of articulating this postulate of Idealism, and I may be accused of setting a value on what is merely actual against the deeper insight which transforms the given and finds things to be other than they seem. It is advisable therefore to make clear that although current forms of Idealism are alleged to be defective, the remedy is not a transition to Pluralism, but a more genuine interpretation of the Absolute. Not less but more system is required.

The obvious finitude of our minds does not imply that we have a firm abiding place in any particular fact or mode of life. It seems clear that such principles or facts as life, the will, the self are not self-explanatory. They point to large portions of reality beyond them, they arise in the course of time, they have presuppositions both in a temporal and in a logical sense, and we have to admit that in our experience, at any rate, they do not mount to the level of complete universality. The individual finite self is the vehicle of forces and influences which are wider than it is; and whether we call this wider reality Nature, or the Absolute, or Humanity, or God, the particular self when compared with it is imperfect, weak and dependent. No particular experience can stand undisturbed amid the movement of things; every part of our world is symbolic and self-transcendent in some degree. The first task of an Idealist philosophy is to change the attitude of the thinker. Instead of taking some one particular datum as stable and absolute, *e.g.*, the Cartesian self or the Pragmatists' purpose, and interpreting all in the light of this unexamined fact, Idealism acknowledges that nothing short of the system of experience as a whole is absolute. If we were to adopt in all sincerity the Humanistic scale of values,

it would be difficult, if not impossible, to avoid a pessimistic conclusion. Reality is too obviously not constructed in the interests of particular people ; the world does not conform to our needs unless we have adjusted our needs to that which the world is prepared to recognise. It is hopeless to search for some one finite satisfaction towards which all things converge, and to which they all minister. It is not easy to see how those who adopt the Humanistic view avoid the inner conviction that reality cares little for human purposes and selves, and is in the main indifferent to morality. The superiority of the objective to the finite subject is made manifest by the insistence on trial and error, and on postulation at one's own risk, which is often found in writings of this school. If we accept the ultimate rationality of the world, we must agree with Hegel that philosophy ought to be cosmocentric, and that the highest value is the realisation of a world, and not the self-satisfaction of a finite part of that world.

The appeal to history and contingency against science and law has thus a false motive. It is an attempt to break the coherence of the whole, and to maintain freedom and particularity at the expense of system and totality. Idealism holds that the abstract and perhaps hypothetical universals of natural science do not offer an adequate account of the whole of experience ; but there is disagreement concerning the relation of the higher categories to the inadequate mechanical ones. What is the relation of the laws of physics and chemistry to the more comprehensive principles beyond them, *e.g.*, such as are fundamental in moral responsibility, in art and in religion ? The main danger in replying is a tendency to Dualism. The difficulty is to find categories sufficiently concrete to include all the truth and vitality of the ordinary common-sense view of things, and at the same time to do complete justice to science.

Dr. Bosanquet offers us the most recent attempt to state the real nature of experience ; and his view of the Absolute mediates between the doctrine of Hegel and that of Mr. Bradley. Hegel believed that thought is able to discern the full nature of the real, and that its limitations are *de facto*, and not necessary in principle. Mr. Bradley convicts thought of suicidal defects, and insists that in spite of the reality which it contains, it is ultimately an appearance which is not adequate to the whole. To reach the whole, thought must be destroyed. It is difficult to say with which view Dr. Bosanquet agrees in the last resort. He insists on the rational character of the whole, and he realises more clearly

than does Mr. Bradley, that the dialectic of experience is not merely a condemnation of appearances, but the actual reconstruction for us of the world. The contention of this paper, however, is that his view is not completely successful, because he has not done full justice to the lower aspects of things. A concrete category exists and operates by reason of the peculiarities of the abstract and lower categories which it sublates; and it is impossible, so my argument runs, to understand the nature of the whole unless the function of the parts is known. Dr. Bosanquet appears to adopt at least an Agnostic view of the reality of time. His view tends towards the mysticism of Mr. Bradley, rather than towards the Idealism of Hegel.

Dr. Bosanquet rightly points out that it is of the utmost importance that we should turn in the right direction when we seek to bring wholeness into our lives, and that we should use as our clue the structural universals of our highest and noblest moments. In a marginal analysis he says: "Revolting from Mechanism we should go not to History but to Art and Religion".[1] We are presented with two antitheses which tend to coincide. History stands over against art, morality against religion. Prof. Ward, *e.g.*, interprets reality from the standpoint of history and morality; Dr. Bosanquet proposes to interpret it rather in the light of art and religion. With Dr. Bosanquet's polemic against identifying freedom with contingency and with the absence of objective coherence between the self and nature I am fully in accord; but there seems to be a real factor of life present in the experiences on which Dr. Ward relies, which is not usually found entire in art or religion. The antithesis with which I intend to deal is that of art and history. The further implications of morality and religion must be left aside.

It is not necessary to state here the positive qualifications which art possesses for the task of elucidating the meaning of reality. A reconciliation of subjective and objective is accomplished by the artistic object, and the mind has, as immediate and present, an apprehension of that deeper significance of things which common-sense is wont to regard as beyond this life altogether. The argument requires rather that the defects of art should be emphasised. Art is always symbolic. We may agree with Plato that it consists of imitation, although it is not an imitation of finite objects. The object that is copied in the highest works of art is the Idea itself; and the meaning of life as a whole is present in some degree. But art cannot rid itself of the defects of copying.

[1] *Principle of Individuality and Value*, p. 78.

The entire meaning of a life, or even of a mood, lies only in its full development. The finite forms in which the principle realises itself are not indifferent to it, and if these are altered and abbreviated the principle itself is weakened. Art presents the significance of things in a foreign medium. It is always sensuous, and reality at its highest terms cannot be presented in a single sensuous form. One of the categories of real life which is generally treated as subordinate by art is time. Much art is timeless—temporal relations seldom enter into its content, and its significance is usually indifferent to them. The danger of using art as a clue to the structure of the Absolute is that time is apt to be neglected in the result; the unity which is valued is one which is beyond time, and holds independent and perhaps in spite of it.

Dr. Bosanquet cannot be accused of ignoring time altogether. He desires to do justice to all the claims of externality and objectivity, and his basal position is that the freedom and strength of the individual comes from his connexion with nature and not from his isolation. Indeed much of the first series of his Gifford Lectures contains criticism of M. Bergson's view of time, in which he maintains in effect that M. Bergson does not grasp the significance of the category whose name he uses. But it is questionable whether Dr. Bosanquet himself has taken time into account. In what follows I wish briefly to note some characteristics of time, and to suggest that criticism of it is often too facile; then I shall argue that Dr. Bosanquet does not include the whole truth of these characteristics within his view, and that his conception of the Absolute is to that extent defective.

Time presents us with two aspects. On the one hand it requires permanence and unity of content; on the other it implies change and exclusiveness. This can be seen in the relatively simple forms of experience from which the conception is derived. The simplest experience of time is given in what Prof. Stout has called the 'not yet' and the 'no more' attitudes. We have a vague expectation, or apprehension of loss, and this involves a contrast with a content judged as present. Any such experience extends over a lapse of time, but it requires an identity of content. The 'not yet' consciousness involves a conation, a holding together of the various moments, so that there is one purpose or object developing throughout. If the process were discontinuous, and if the identity of content were broken at any point, the purpose would be meaningless, and the contrast between idea and fact, between future and present, would disappear. But, on the other hand, the apprehension of time implies

consciousness of the externality of the past or future to the present. Each moment is negated by the other. The past is that which is no longer, the future that which is not yet. The dog in the fable who dropped his bone to grasp the reflexion, learnt very decidedly that in the 'no more' consciousness the present excludes and negates the past. Each of these two aspects is essential to the conception (or perception) of time, and if either were taken away the whole would vanish.

This externality of the parts of time to one another is akin to that of the parts of space, but it is distinct from it. The mode in which we try to picture abstract temporal relations to ourselves may borrow greatly from spatial imagery, but the amount of the loan can easily be exaggerated. M. Bergson attributes all the apparent externality of time to a confusion with space; and the result in his view is that time is a category lacking all externality. This is a mistake. Time has an externality of its own; its parts stand out of one another in their own right, and this outwardness is not derived from space. The consciousness of the exclusiveness of parts of time probably arises psychologically from different primitive experiences from those through which we become aware of space; and in its developed form time, or that aspect of time which we may call succession, is a distinct mode of arranging the contents of experience. If we say, *e.g.*, that Blucher reached the field of Waterloo at the eleventh hour, we do not mean that he arrived at a point eleven parts from one end of the field. He was not present at any hour before the eleventh, and those previous hours are external to the one in which he arrived; but this externality is in no sense spatial; it is *sui generis*, an outwardness of past and present, or, if we like, of before and after. If we remove this aspect of time we destroy the whole. If we do not keep the various happenings each in its own historical place the whole becomes confused, being and not-being are predicated at once and in the same way. Time thus involves the reality of succession: and if succession is not real, time is not real. Hegel has emphasised this externality of the parts of time to one another, and he calls the category as a whole the self-external.[1] The aspect of succession can be represented in more than one way. Past, present and future, says Hegel, are the dimensions of time.[2] It is also possible to represent succession in terms of before and after, or earlier and later. The difference between the two series appears to be twofold. There are

[1] *v. Encyclopædie*, § 258. [2] *Ibid.*, § 259.

three terms in the first series and two in the second. This may be regarded as due to the elliptical form of speech used in the second case. All reference in the time series involves a fixed point, a base, and in judgments of perception this is always the present. For perception the present has a higher importance than the past or future, and it is invariably chosen as the centre of reference; past and future are measured in opposite directions from it. The series indicated by before and after does not have such an inevitable starting-point. The interest for thought lies generally not in focussing everything on to one particular point, but in comparing *e.g.*, distances in various parts of the series with one another. For this purpose two terms are sufficient. Every point in the series can be treated by thought as the present, and this term disappears from the expression. The reason is not that thought abstracts from the present, but that because every point may have the characteristic of centre, or base, the significance of the term as a unique point is reduced. The difference between the two series is that between a subject within the stream of time, unable to rise above it, and confined for his starting-point to a datum, and a subject which can see the series as a whole, and invest each point with all the characteristics in turn. It is the difference between perception and thought. The second point of distinction is connected with this. The subject which is in the stream of time, and is limited by his datum, regards the past as fixed and dead, and the future as uncertain. Such a view seems in the last resort to be due to defective knowledge. If we hold firmly to the systematic character of reality and reject the conception of loose-jointing, the contingency of the future and the deadness of the past are not fully real. In a sense the past is altered as the world develops in the present. The past is only part of the whole, and the process of filling out that whole modifies the past. In the same way our failure to estimate the future does not indicate that the future is an unreality detached from the present and the past. The conception of before and after treats each term as real and as in the system; so that the contrast is again between perception and the more systematised form of experience which we call thought. The series of before and after is thus in a sense derivative; but if it is taken concretely so that each moment is recognised to be a present with a past and a future, it is a truer rendering of the nature of succession and hence of time.

We may now consider the way in which time is sometimes judged to be unreal. The problems raised are all connected with the fact of change. Change occurs in time, we say;

and thinkers who reject change deny the objectivity of time. There has always been a tendency in philosophy to deny the reality of change, and the philosophers who have given way to the tendency have often been called Idealists. Being which does not alter seems to have a stability and strength which the mind demands in its object but which it cannot find in a world of becoming. It is, however, abundantly clear from the history of philosophy that such a doctrine cannot be made absolute. Change appears, and we know reality only through its appearance. If change is repudiated as unreal, insoluble problems are raised regarding the relation of appearance and reality.[1] The usual device which is adopted to discredit change and time is to distinguish two or more aspects of the whole conception, to isolate these, and so set them in absolute contradiction. The method was perhaps invented by the Eleatics, it was exploited by Lotze, and Mr. Bradley has improved it and extended it over the whole field of experience. This procedure is not that adopted by Hegel. For Hegel any imperfect conception implies another over against it with which it is bound to come into conflict. But the contradiction is not final; it is due to an appearance of completeness presented by the parts, while at the same time they manifestly require a complement. But according to Hegel each such conflict can be resolved in a more concrete conception. To take the simplest example, being and not-being are both resolved in becoming. Becoming is a wider and deeper unity which maintains both of the imperfect aspects within it, and requires both in order to be itself. The method criticised is other than this. When the imperfect and one-sided conceptions are set in opposition, it does not recognise that an abstraction has been made and that each part is defective because it is merely a part. It pronounces one to be essential and the other non-essential. Usually in the case of change it adheres to the aspect of permanence, and bids the aspect of instability and difference depart to the place appropriate to merely subjective appearances. Dr. McTaggart, *e.g.*, follows this course.[2] He analyses time into two simple series; the one, called the A series, consists of the relations of past, present and future, and the other called the C series, is constituted by a timeless order. The C series is declared to be real, while the A series is a mere appearance. I wish to show that the A series is found to be unreal by Dr. McTaggart because the C series is *assumed* to be the criterion. The main objection to the reality of time

[1] *Cf. eg.* Joachim *A Study of the Ethics of Spinoza*, p 226.
[2] MIND, Oct., 1908.

urged by him is that the A series is self-contradictory. Past, present and future are incompatible attributes—that which is past cannot be present, and so on—but each is applied to one and the same event. I have thought of the writing of this paper as an event in the future, it is now a present fact, and will soon, I hope, be in the past. But these predicates cannot all apply to the same event, for the one object cannot be past and present and future. Hence the whole category, *viz.* the A series of time, is an illusion. The natural retort to this is that the predicates are not absolutely exclusive, and that they are opposed only when applied to the same object in the same way. But to this Dr. McTaggart objects that the attempt to prepare those differences in the object which would enable it to receive the different predicates without confusion, presupposes the series which it is intended to explain. If we say that the event *was* future, *is* present, and *will be* past, we are arguing in a circle, and possibly are involved in an endless regress. We assume time to explain away the contradictions of time. We need not ask at present whether Dr. McTaggart's position is sound when he says an A series together with a C series is sufficient to constitute time. Although there are good reasons for supposing that the real nature of succession is more truly presented by the series of before and after, which Dr. McTaggart treats as subordinate, this point need not be pressed, and we may accept the A series as typical. The point of importance is that the argument criticised makes use of the objectionable method previously indicated. Having analysed time into two aspects, on the one hand a series having absolute permanence, a timeless order, and on the other a series whose predicates are intelligible only on the assumption of the reality of change, Dr. McTaggart sets the one against the other, and holds the contradiction to be final. In the result he rejects the aspect of succession. Having said that past, present and future are incompatible predicates he asks his critic to make them compatible without involving the conception to be justified. But is it obvious that past, present and future are incompatible predicates? Predicates, as such, are not incompatible, only judgments are so. The form of words used to express the judgment is of no consequence; Dr. McTaggart must show that there are two judgments in conflict and that the meaning of the two cannot be harmonised. But the predicates in question, as used, are correlatives. Past, *e.g.*, has its meaning with reference to the present; it comes from the 'no more' consciousness, and contains a contrast with actual satisfaction. The pre-

dicates, past, present and future, when applied to the same event, are used at different times, and from the logical point of view that means that the various judgments have a different content. The two propositions, X is past, and X is present, are elliptical. Each expresses a relation of an object to the whole field of experience containing it and to a centre in that field. This centre is not named, but it is understood, and without it the judgment would have no significance. Dr. McTaggart's argument eliminates this centre. The judgments come into conflict only if they have the same centre, or, in other words, if different elements are related in the same way to the same point of reference. And, mistakes apart, this occurs only if the unreality of time is assumed. How is the elimination made? By interpreting the dictum 'once true always true' in a static sense. It is assumed that for truth time does not exist, and it naturally follows that the object has no room for the peculiar predicates which belong to time. No doubt there is a sense in which reality is timeless, as there is a sense in which all things are one; but my contention is that there is no more justification for interpreting the timeless aspect of the world as exclusive of change than there is for interpreting the unity of reality as exclusive of difference. It can be maintained that a merely timeless Absolute cannot include all the reality of experience, and on this view timelessness is not the whole conception but only an integral part of it. If this position is taken, past, present and future do not appear *prima facie* as contraries, they seem rather to be solutions of experiences which without them would be self-contradictory. They are incompatible only if timeless is not an aspect of the whole but the whole itself; and that is the point at issue. *Prima facie* the proposition X is past, expresses the relation of X to a different centre to that used in the judgment X is future. Dr. McTaggart has to show that this difference of content is not there. The onus of proof lies on him and not on his opponent; and his argument must not assume that reality is ignorant of change. It is very easy to come to judgment with half-concepts for whose value we have positive evidence, and to criticise the other half by means of them. But the method is unsound. It is unfair to reject time because its contribution to reality has a different character from that made by permanence.

Before setting forward the positive claim which time has to reality, and to a place in the Absolute, I have to justify the statement that Dr. Bosanquet is ultimately of the same opinion as Dr. McTaggart in this matter, at least so far as

its practical effect on his view is concerned.[1] In his logic[2] Dr. Bosanquet answers the question, "Is not Time Real?" in this way: "Everything is real, so long as we do not take it for what it is not. Time is real as a condition of the experience of sensitive subjects, but it is not a form which profoundly exhibits the unity of things." The statement is very cautious, and one must admit the truth of most that it asserts; but what is the significance of the reference to sensitive subjects? The meaning appears to be that time is a form of the *appearing* of reality to us, and is not a qualification of reality itself. A timeless whole is apprehended part by part; time is a mode of the act or process of knowing, but it does not characterise the object. Dr. Bosanquet seems to treat time as a subjective hindrance to the direct appearing of the total real. "The *first* operation of our intellectual synthesis is to build up an ideal objective order which, though itself not in time, yet contrasts as a more or less completed reality with the sensitive experience which is always passing into it."[3] And speaking of history in its aspect of mere succession, he says: "History therefore, *in the sense of the mere record of remembered fact*, would seem to have for its ideal to disappear into systems of hypothetical judgment, in which complete ground should do duty for cause and effect, and the relation of time should disappear."[4] It is true that Dr. Bosanquet tells us that history is more than such a mere record, but it is significant that succession on his view is said to be taken up into a system where the relation of time *disappears*.

It might be said that although time is irrelevant to logic, it may be a functional reality in metaphysics: and although the implied distinction between logic and metaphysics has difficulty in maintaining itself, we must turn to the Gifford Lectures to see if the retort has any bearing on Dr. Bosanquet's view. We may note first that time is said to be a hybrid experience,[5] and succession appears to be the inferior element. Space and time are "externality and succession, presupposing a degree of unity *which would annihilate them if it either were completed or were reduced to zero*".[6] Dr. Bosanquet does not commit himself carelessly to the unreality of time, but his tone is against its objectivity. He urges that we must "distinguish the conception of changing or progressing as a whole from the conception of uniting in a self-complete being character-

[1] And, one might add, so is M. Bergson.
[2] Vol. i., p. 273. [3] *Ibid.*, p. 272. [4] *Ibid.*, p. 276.
[5] *Individuality and Value*, pp. 338, and 371. [6] *Ibid.*, p. 371.

istics which for us demand succession".[1] The implication is that "characteristics which for us demand succession" can be brought together in reality and harmonised without using the conception of time. This interpretation is confirmed by Dr. Bosanquet's method of criticising the view that the span of consciousness provides us with the reconciliation of timeless and temporal. He presents a dilemma. "Among the occurrences which are present as at once to a consciousness with a protracted time-span, the later must either modify the earlier, or not"[2] "If within the one specious present, the later occurrences do not modify the earlier, if, that is to say, as in a common temporal succession, the earlier are not influenced till the later have occurred, then we have no transmutation, but only a fixed panorama of exactly the same occurrences which form a diorama for the man who goes through them. . . . Omniscience is then to see in any lapse of successive events nothing more than a finite being would see so far as he followed that identical lapse."[3] *I.e.*, if the parts are external there is no transformation. On the other hand, if there is a transformation the externality of the parts, the succession vanishes. A man passes four hours in distress because he fancies that a friend is annoyed. At the end of that time, his mistake appears, and his misery vanishes. "If the later contents act on the earlier within the same specious present of the longer span of consciousness, in the same way as they do within the shorter specious present of an ordinary consciousness, the four hours interval of distress must for such a consciousness cease to exist as such. It cannot help being transformed, and turned, on the whole, to a feeling partaking of gladness." Dr. Bosanquet has set succession over against wholeness, the latter being under the name of transformation; and his dilemma appears to ruin the conception of the specious present. He admits that imperfection must be represented in the whole. Imperfect essays, such as a sketch for a picture, may have a positive value which we do not find in the finished result, and he believes that the Absolute must include the full truth of the sketch. But he says: "Transmutation must be the rule in the complete experience. Everything must be there, as all the artist's failures, and the fact of failure itself, are there in his success. But they cannot be there as analysed into temporal moments and yet drawn out unchanged into a panorama within a specious present of immeasurable span."[4] Dr. Bosanquet

[1] *Individuality and Value*, p. 244.
[2] *Ibid.*, p. 387.
[3] *Ibid.*, p. 388.
[4] *Ibid.*, p. 391.

has opposed transmutation and succession in a way which seems to apply not only to the specious present, but to any conception of time; and one can only conclude that for him the unity which holds through time is the only thing of importance. The plan or principle or individual realises itself in spite of the appearance of succession; and the not-being which is a moment of change does not stain the content of reality. His view appears to be that time, for us, breaks the continuity of the whole, but this is appearance only. Causality with its temporal succession resolves itself on deeper insight into ground and consequent, where time is transcended and lost; and presumably the same thing is true when we interpret life through categories which are still higher.

This view, I take it, is in accordance with the clues which art affords to the nature of the whole. The poem may be spread out in time as we hear it, but that is irrelevant. The meaning, *qua* whole, is timeless. Time applies to the presenting of the whole and is not a form of its content. So too with the apprehension of a picture, and perhaps even with music. The aspect of succession belongs to "sensitive subjectivity" and not to the object itself; it is a scaffolding by means of which we erect the building, but when the edifice is complete the scaffolding is removed. This statement does not appear to do substantial injustice to Dr. Bosanquet's view, and a strong support for it is found in the fact that nowhere in his scheme does succession fulfil any function in the whole. The whole is in spite of succession, never because of it; and the heartiest welcome given to time is a doubtful toleration.

Idealism cannot afford to adopt this attitude. A static whole, a conception which excludes succession, cannot be the Absolute. If we turn from the guidance of art to some form of experience which includes both history and law, we find that succession plays a vital part. Let us take a somewhat trivial example first. In any game of skill the externality of moments of time is essential. The batsman in cricket must make his stroke at the moment in which the ball is there, and the bowler seeks to make him strike at a moment in which the ball is not in the right position. In most exercises of this sort 'timing' is important; and timing depends on the consciousness that one event must be contemporary with another event, and not with certain others. The plan of the whole is realised *because* the content of certain moments excludes that of other moments; that is to say, the unity of the whole depends on the self-externality of time. The same

function of time is obvious even in some works of art, although it is not the fact of chief importance. The whole conception of Othello depends on the externality of moments of time to one another, that is to say, on succession. If love and hatred and jealousy and remorse were all brought into direct and immediate relation, so that each is only as modified *ab initio* by the others, there were no tragedy. This argument does not mean that the 'long arm of coincidence' is a valuable weapon in the armoury of the dramatist, or a serviceable tool of the Absolute. Coincidence in this sense means a joining together in time of two events which have not brought themselves into that time by virtue of their content. The conjoining is external to the material, it is imposed upon it from without, and the plan has not complete coherence. But the matter is different when the unity of the content itself needs its parts to be external to one another in time, as in the game of skill. And art makes a proper use of time when the externality is an element in the integration of the whole. There is no escape from this in the drama, and none in real life. The 'not yet' and the 'no more' consciousnesses are essential to the life we know; most of our plans depend upon them, and if a merely timeless order is substituted for them, our purposes become unmeaning. The aspect of succession is not merely a hindrance to totality, it may be a means to it. And any conception of the Absolute which ignores this leaves out much of the meaning of life.

We may apply this contention to the question of freedom. Dr. Bosanquet, following Hegel, has shown that freedom does not lie "in the direction of isolating the self from the world".[1] It is found in action from within, and in the tendency towards wholeness which is found in such action. After maintaining, rightly as I believe, that the conception of external determination is not applicable, in the last resort, to a genuine totality, of which the concrete self is an instance, and that the self is free because its purposes are the potencies of its world, Dr. Bosanquet raises the difficulty of predetermination. "Previously existing circumstances, united in a centre . . . work out their inevitable resultant in combination with present conditions."[2] This to the ordinary consciousness is the gravest difficulty in the way of accepting the Idealistic conception of freedom as self-determination. It is little use saving the self from environment if we have to sacrifice it to heredity. The determining factors, it is said, lie in the past, and the past is outside the self. At first sight it appears as if the denial of the reality of time is best suited to meet the

[1] *Individuality and Value*, p. 326. [2] *Ibid.*, p. 327.

difficulty. The appearance of externality is illusory, it will be said, succession is not true, and the internal unity of the mind is not thus limited. But on second thoughts we find no escape in this direction. Succession is there in some sense and it is potent; the statement that time is illusory means nothing more than that the self is unable to extend its grasp over the past or into the future when it seeks to be fully real. Time has been left outside the individual, and the externality of the past is a limiting feature which negates freedom. The only method of maintaining freedom is to justify the power of the self to include what is past, not as a dead element, but as a vital factor in the life of the present. To do this we must admit the objectivity of time, and allow the self which attains to reality to grasp time as a moment of its being. Dr. Bosanquet is anxious to include the full strength of objectivity within the free subject; but if succession does not come within the plan of the whole, and is not an ingredient in the real self, then the so-called free self is externally determined because it cannot identify itself with its antecedents. Time is the self-external, and the question for Idealism is whether this self-externality is to be made absolute, and this is the ultimate effect of calling it illusory and subjective, or is itself to minister to the freedom and strength of higher and more internal principles. If we can still call the self free after we have taken all considerations into account, it is only because there is nothing alien to it—not even the principle of externality itself.

The main contention that has been urged here might also be illustrated by reference to Dr Bosanquet's treatment of conation and teleology. From the standpoint of this criticism he is right in holding that purpose is a subordinate form of teleology, but his argument is onesided. We cannot explain the world if we take bare finite purposes as our integrating universals, for each such purpose gains its significance from a wider whole within which it falls; and I do not know how Dr Bosanquet's argument is to be met when he says: "Things are not teleological because they are purposed, but are purposed because they are teleological".[1] But surely this is only one side of the truth. Philosophy begins by negating the particular as such, but it must go on to restore within the universal the value and power which seems to crude common sense to belong to the immediate fact. Dr. Bosanquet does not do this fully, even in principle. Purpose is not self-explanatory, but it is not an accident. The fact that a teleological whole does occasion a finite purpose, and is

[1] *Individuality and Value*, p. 137.

realised in it, must make a difference to the teleological whole itself. It must have in it some necessity which drives it out into self-estrangement, and makes the purpose necessary if the whole is to be itself. But Dr. Bosanquet continues: "Thus, when we speak of the ultimate real as an individual or as teleological it is hazardous to say that purpose, in the sense of a craving unfulfilled in time, *can play any part* in our conception".[1] Finite contrivance does not make value, but there is a reason in the value for the contrivance which seeks it. Dr. Bosanquet's argument against Dr. Ward is weakened by the position he takes up here. "Every purpose, no doubt, implies a subjective value, but there is no reason why every true value should be a purpose."[2] Dr. Bosanquet leaves room for the retort that there is no reason on his view why *any* value should be a purpose, and as it is an undoubted fact that some values are purposes, it is still possible that all values are so.

Hegel recognised the necessity of including the lower in the higher, and whether or not his view is completely successful, he tries in the *Philosophy of Mind* to make the externality of nature contributory to the concreteness of spirit. *E.g.*, in the *Philosophie des Rechts*[3] he indicates that the loss of property through prescription is not an arbitrary device, introduced to avoid the confusion which would arise if old and new claims to property had equal validity. "Prescription," he says, "is based on the reality of property, and on the necessity which forces the will to go out of itself if it is to possess anything." The will must externalise itself, and it passes from abstract unity to concrete totality not in spite of but because of time. Dr. Bosanquet admits formally the necessity of finite experience to the infinite,[4] but the conception is not articulated; it does not appear within the structure of the whole. The passage from finite to infinite is all important, while the outgoing movement of the infinite into finite centres and processes in time is merely tolerated. The failure to recognise the reality of time is at least part of the reason for this.

Like Mr. Bradley, Dr. Bosanquet contends, if I understand him rightly, that the appearance of the whole in finite minds is an ultimately inexplicable fact.[5] And one must be cautious when a philosopher adopts this defence. Explanation, in the sense of resolving a thing endlessly into what it is not, Dr.

[1] *Individuality and Value*, *pp.* 137-8. Italics mine.
[2] *Ibid.*, p. 127. [3] Section 64.
[4] *V. Indiv. and Value*, pp. 243, 383.
[5] *Ibid.*, p. 371; *cf. Appearance and Reality*, p. 226.

Bosanquet does not offer, and one does not ask for it. To explain is to set the object in a relevant context; and in this sense the whole cannot be explained. All explanation is within the Absolute. But it is reasonable to suppose that everything which has a context can be explained, and that the refusal to explain finite things indicates a failure of method. Questions may be asked of any one but a Pluralist or a logical Pessimist concerning any fact short of the whole; and it is difficult to see how it can be maintained that, for Idealism, time, or succession, is the whole. Such an imperfect aspect of the real as time has surely a context, and the failure to place time in its proper setting renders the higher categories abstract. Dr. Bosanquet's view would be more convincing if he had regarded the individual as real not merely in spite of finite teleology, but also partly because of it. To do this he would need to be in earnest with the reality of time.

It is one thing to discover that time is objective, and to catch glimpses of its mode of working; it is quite another to determine accurately the part which it plays, and to decide its relative value. There appear to be two main alternative views. On the one hand we may say that time falls *within* the whole, and that although change applies to the parts of reality the whole does not alter. Change occurs within the Absolute but the Absolute does not change. The other view would reject this conception on the ground that it treats one of the aspects of time, *viz.*, timelessness, as more adequate to the whole than the complete conception containing that aspect. The whole, it might be said, is a permanent which changes; and neither element is more important than the other. The decision of this question probably depends on the possibility of framing a conception of a changing whole which contains the grounds of its change within itself. The discussion of the problem must be reserved at present, but whichever of the two views is to be accepted, change and time are real. "In this way, truth is a Bacchanalian revel, where not a soul is sober; and because every member no sooner gets detached than it *eo ipso* collapses straightway, the revel is just as much a state of transparent unbroken calm."[1]

[1] Hegel: *Phaenomenologie, Vorrede*, Eng. Trans., p. 44.

IV.—PRAGMATIC REALISM—THE FIVE ATTRIBUTES.[1]

By John E. Boodin.

The problem of attributes is somewhat out of fashion since the dominance of modern idealism. It has become a habit to think of reality simply in terms of experience, and reflective experience at that. It seems to me, however, that with our new epistemological tools we are in a position to take up seriously some of the metaphysical problems, applying the pragmatic method. In using the term pragmatic, I do not mean to commit myself to any of the special doctrines which have recently passed under that name. I mean that any reality must be conceived as the differences it makes to our reflective purposes. This holds whether the reality in question be of the thing type or the self type or some other type.

I.

Substance has come to have a distinct scientific meaning in modern times. So far as it is possible to revive the Spinozistic conception of substance, it would now amount to the epistemological postulate of totality, *viz.*, that facts are part of one world in such a way that every fact can, under certain conditions, make a difference to other facts.[2] What those conditions are, it is for science to investigate. The differences must also be capable of becoming differences to a reflective consciousness under certain conditions, in order to concern us.

These differences are capable of being systematised into certain attributes—*summa genera* of differences not further reducible. My reflexions have led me to believe that there are five such attributes, irreducible to terms of each other, *viz.*, stuff, time, space, consciousness and form. Future

[1] A preliminary statement of this doctrine, under the title of "The Attributes of Reality," appeared in the *Journal of Philosophy, Psychology and Scientific Methods*, in 1907. As the statement is now somewhat antiquated I have used parts of it freely in the present article. A fuller statement will appear soon in a volume entitled *A Realistic Universe.*

[2] See, *Truth and Reality*, chap. vii., Macmillan, 1911.

investigations will have to determine how far these are ultimate attributes and whether there are others.

It is true that such attributes are abstractions from the total matrix of reality. But to say that they are abstractions does not mean that they are ideal or phenomenal in the sense that they belie reality. Without abstraction we can have no science of reality. These attributes are genuine aspects of reality if we must recognise them as such in the procedure of experience.

The classical discussion of attributes goes back to Spinoza. Spinoza makes causal difference, as well as conceptual, depend upon the possession of a common attribute on the part of the contents. He even goes farther and reduces the causal relation to the conceptual: "If things have nothing in common, it follows that one cannot be apprehended by means of the other and, therefore, cannot be the cause of the other".[1] This evidently is a confusion of causal dependence with logical dependence—a confusion of which later idealism has so often been guilty. With Spinoza this identification easily follows from the ambiguity of his parallel attributes, as we shall see later.

The same reality, according to Spinoza, figures in different attributes. Thus substance must figure as both thought and extension. It must also figure in infinite other ways not included in experience. Thus substance must possess not only all the attributes of which there is evidence, but infinite others. This is the mediæval dogma of the *ens realissimum* of which we still find evidence in the idealist's conception of the infinite variety in which his absolute is supposed to revel.

It is not necessary to point out that Spinoza is inconsistent with his own thesis, that every fact within reality must be conceived with reference to a context, or, as he would put it, must have a common attribute with the rest of reality. He is inconsistent, first, as regards the relation between thought and extension, for extension must be conceived, and so must be capable of making a difference to thought. To be indifferent or parallel to thought would be to be without significance. He is still more inconsistent as regards his infinite attributes. These, by hypothesis, make no difference to thought, and yet are assumed. On the contrary, in so far as we make an *a priori* assumption, we must start with a finite number of attributes. Else knowledge becomes impossible. As a matter of fact, we have a right to assume only as many attributes as make a difference to judging or reflective experience. The question whether these are

[1] Spinoza, *Ethics*, Part I., Prop. iii.

altered by being known can have no meaning, since it is only for reflective experience that attributes have significance. We must assume that the attributes are what they are consistently known as in progressive human conduct.

It is unnecessary to point out that extension, with the geometrical qualities it implies in Spinoza, cannot be made an independent attribute apart from the energetic context in which a thing figures, including our perceptual organic context. Extension is as much a quality as is colour or tone. To be sure the quality of extension may be said to exist in contexts independent of experience. But extension, to be known at any rate, must figure in the context of our perceptual consciousness. And if so it cannot be parallel to experience in Spinoza's sense of forming an exclusive and complete world of its own.

Spinoza himself was far from consistent in the relative emphasis he put upon the two attributes. When he dealt with the problem of knowledge, he was inclined to regard mind as the mere consciousness of the actions of the body —*idea corporis*. He at least came dangerously near being a materialistic realist. As he puts it: "The object of the idea constituting the human mind is the body, and the body as it actually exists".[1] And again: "The human mind is the very idea or knowledge of the human body".[2] No wonder then that the order and connexion of ideas is the same as the order and connexion of things,"[3] or as he puts it elsewhere "as the order and connexion of causes".[4] It follows, also, that his theory of association must be strictly physiological: "Memory is simply a certain association of ideas involving the nature of things outside the human body, which association arises in the mind according to the order and association of the modifications of the human body".[5] This materialistic tendency is seen also in his physiological theory of emotions: "Whatsoever increases or diminishes, helps or hinders the power of activity in our body, the idea thereof increases or diminishes, helps or hinders the power of thought in our mind".[6] It follows, on this view, that our knowing the object does not in any wise alter the object, though our ideas may be inadequate, fragmentary or confused. Such privation of knowledge is falsity. Knowledge, when clear and distinct, takes account of the object as it really is in its own eternal system of relations which Spinoza calls God. Materialistic realists of to-day have repeated both

[1] Part II., Prop. xiii.
[2] Part II., Prop. xix.
[3] Part II., Prop. vii.
[4] Part II., Prop. xix.
[5] Part II., Prop. xviii., note.
[6] Part III., Prop. xi.

the theory and inconsistency of Spinoza, for while holding that mind is just the awareness of the body, he finds it hard to rule out mental facts as such with their own unique relations.

What blinded Spinoza to his epistemological materialism was doubtless his play on words. Thus he argues, as we have seen, that mind is the consciousness of the body But he argues further that "this idea of the mind is united to the mind in the same way as the mind is united to the body".[1] He thus, after telling us that "the object of our mind is the body as it exists, and nothing else," substantializes this idea of the body as having a "distinctive quality"[2] of its own. This process can then be repeated on the idea of the idea, etc., *ad infinitum*. But the fact is that there is no new content provided for in this repetition. It is purely a trick of language. We remain, where we started, with mind as the consciousness of the bodily modifications. That we know that we know, in any case, only signifies that the attitude of knowing brings its characteristic feeling of belief with it, in so far as it is successful.

When Spinoza, on the other hand, turns to the problem of conduct, he becomes as idealistic as he is materialistic in his epistemology. He attributes all agency to systematic thought and the passive becomes synonymous with the confused and unreal. For in the case of ethical conduct, cause no longer means physiological processes, but clear and distinct ideas. Our mind is active "in so far as it has adequate ideas".[3] "The passive states of the mind depend solely on inadequate ideas."[4] And man can be said "to act in obedience to virtue" only "in so far as he is determined for the action because he understands". Finally, the mind's highest knowledge and highest virtue is to know God. And to know God is to love God and to love him with "that very love whereby God loves himself",[5] "wherein our salvation or blessedness or freedom consists." Thus Spinoza halts between divided motives. Spinoza's logic at any rate leaves us only one attribute—one complete system whether of matter or thought.

Modern science, in so far as it has been allowed to pursue its own task, unhampered by metaphysical suppositions, whether of the materialistic or idealistic sort, has always insisted upon as many attributes or independent variables as the facts seem to require. These seem to be three for

[1] Part II., Prop. xxi. [2] Part II., Prop. xxi., note.
[3] Part III., Prop. i. [4] Part III., Prop. iii.
[5] Part V., Prop. xxxvi.

natural science: space, time and energy. The conception of energy has gradually supplanted the conception of mass as a universal ideal of description. Mass [1] is applicable only within a limited field. It is not applicable, for example, to electricity; while energy with its equivalences of transformation can be made to cover the whole extent of process, material and immaterial; physical and psychological.

In spite of the fact that natural science has found it necessary to work with these three attributes, it has failed to define them in any clear way. The desire for simplification has always made itself felt. Thus space and time have always been regarded as pure quantity. But if space and time are pure quantity, how can they be given distinct meaning? We must look for the differentia of these attributes, as they are in fact implied in our attitudes to the world of processes with which science deals. Not the serial tools which they have in common, but their specific character, is what we must try to make clear. Certainly, as pure quantity, time and space are indistinguishable from each other and from quantity in general. While it is convenient to reduce time and space to pure quantity for certain artificial purposes of prediction, this should not blind us to their true character in the world which we intend thus to simplify.

Not only has the attempt been made to reduce time and space to pure quantity, but the same attempt has been made in regard to mass. Thus Karl Pearson would reduce mass to acceleration. But if mass and energy are pure quantity how can we get the different units with which quantity must deal? Quantity, obviously, means something different, whether it is concerned with chemical elements or electric potentials or neural reactions. But this only shows the confusion that has been too prevalent in the analysis of scientific concepts.

Moreover, while natural science, in its task of simplifying and anticipating the world of perception, has been forced to emphasise the above attributes, there are other attributes which, though neglected, are nevertheless implied in the whole procedure of natural science. Thus the attribute of consciousness—the condition of the unique relation to mind of being experienced or interesting, in short the awareness of a world, with its complexity—has been neglected by the natural scientist. This is natural inasmuch as this attribute is equally present to the whole field of problems with which

[1] I am using mass here in the sense of gravitational mass, not in the sense of inertia.

he deals, and, therefore, for his specific purpose can be neglected. He has set himself the task of dealing with a specific part of experience, not with experience as such.

Again natural science assumes that its facts can be formulated into a system, *i.e.* that they can be explained in terms of a finite number of simple principles. This obviously is not deducible from the attributes of space, time and energy. On the contrary, it is a formal presupposition or ideal which is implied in all our cognitive endeavour. It holds at any rate in the part of the universe which is moulded by our will; and if science is to be possible this presupposition must hold in the universe at large.

II.

It must be obvious, from this survey of the results of the past, what our problem is. And while the inquiry did not start from the assumptions of science, it must be a matter of more than curious coincidence that the metaphysical needs and the scientific needs point in the same direction, even though the former set a much more comprehensive and articulate programme. Applying the pragmatic criterion, that we must assume only such realities as can make a real difference to our reflective procedure, we must try to make clear what are the ultimate types of differences which reality makes to our reflective conduct, or, expressed in subjective terms, what ways of taking or evaluating our world prove finally effective in our understanding and appreciation of it. Such types of conduct we will call by the classic name of attributes. I will now try, in brief, to define these attributes —the *summa genera* in the reflective evaluation of the character of our world.

"Being."

First a word about the attribute of "being," as it has been called since Parmenides. By "being" we mean the stuff character of reality. This stuff is capable of making definite differences under stateable conditions. This dynamic continuity of stuff, with its equivalences, we call energy. The stuff that has been emphasised by modern idealism is meaning stuff—our reflective purposes. These constitute one type of stuff, and must be taken account of as of final importance for our appreciating and understanding the world. They enable us to differentiate the processes and spread them out in series. Similarity, difference, causality, reciprocity, etc., as general categories or modes of functioning on the part of

the reflective ego, must be part of this account of stuff. This reflective stuff is partly content stuff, partly tendency stuff, which makes the particular content significant.

I want to point out, however, that in order to make a difference to experience, reality need not necessarily be reflective. On the contrary, reflective experience will be seen to be dependent to a large extent upon non-reflective processes. The meaning of the object reflected upon depends largely upon its unnoticed background. There are three ways in which attention may be dependent upon unnoticed facts. Thus processes, not attended to, make up the larger associative context, the background of feeling and tendency, of the object. The different meaning of man or evolution to the scientist and to the common man is largely in the "fringe". Or the unnoticed may be instrumental to the activity of attention without itself being attended to. For example, the words on the page that we read. We have a different consciousness when we are attending to the meaning of the words from what we have when we make the words themselves the object. There may be processes, however, which are entirely irrelevant to the purposive consciousness of the moment, as well as unnoticed by it. Thus the pressure of our clothes, the furniture of the room, the temperature, etc., even though not attended to, make a difference to our consciousness which we can easily see by an alteration of these processes. We have a very different consciousness in reading a book out of doors under the open sky from what we have in reading the same book in our own study, though in either case we may not be attending to the setting. If we want one name for all these various unnoticed mental processes I would suggest subattentive,[1] instead of subconscious, which at best is misleading.

Not only are there mental processes beyond the circle of reflective thought and making a difference to it; there are processes which we cannot speak of as conscious experience at all, which still make a difference to our reflective meaning. That I can take up to-day the problems of yesterday or last year and thus connect again with my own past, seems to be dependent upon a continuity of processes which are not themselves conscious. The unity of the passing thought can account for the continuity of our consciousness only while we are conscious. It cannot bridge over the gap between going to sleep and waking up again, or account for

[1] This term was suggested in the article in the *Jour. Phil. Psych.*, and *Sci. Meth.*, 1907. It has later been advocated by Dr. Marshall in the same journal, but the term subconscious seems to have come to stay.

the bringing back of experiences which have not been active in the meantime. What these non-conscious processes are in their own character must be determined by science according to its convenience. It must simplify them and differentiate them according to our needs in meeting the complexity of our world. Mere *a priori* classification can count for nothing.

One thing is certain, and that is the close relation between what we call physical energy and our mental activities. It is a commonplace that a cup of hot coffee may change our emotional attitude towards the world. But I suppose we would not on that account be guilty of speaking of coffee as emotion stuff. Psychotherapy, again, has made us familiar with the differences that mental processes can make to the physiological. We have gotten over the notion that one process in order to make a difference to another must be of the same kind. Chemical energy is not the same as electrical, though capable of making a difference to it. So different are the conceptual tools which we need in each case that electrical energy is sometimes spoken of as immaterial. This, I take it, only signifies that the conception of mass is inapplicable. The difficulty of finding a common denominator between psychic processes and physiological seems still greater, yet they are clearly interdependent. All we can hope to do in science, and science must here be our last word, is to show definitely the conditions under which the transformations take place. The how of the process, the following of the minute internal transitions, may for ever lie beyond us.

Looking at the stuff character with reference to the implications of the reflective moment, we have found it convenient to look at it as of three levels. These levels can be seen in a cross section, as it were, of every reflective moment, the reflective consciousness showing its dependence upon marginal or unnoticed experience and this again upon processes to which the category of experience cannot be ascribed, and which, for want of a better term, we speak of as physical.

Stuff has the advantage that it can be observed directly. It is an object of immediate perception and judgment. The other attributes of which we shall speak, *viz.*, space, time, consciousness and form can only be observed or make a difference to our judgment through the difference they make to the stuff structure of the world, including our own purposes.

I shall speak of these attributes as non-being attributes, not because they are less real, but because they are not stateable as stuff. In the language of philosophy the stuff

character has appropriated the term "being". These non-being attributes can be defined or differentiated from each other by the difference which they make to the active purposes of the self.

Time.

It has been customary since Kant to deal with the time and space attributes as series and therefore to insist upon their ideal character. I have insisted, on the other hand, that the serial character is relative, and that the real differentia of these concepts must be found in characters of reality which are not themselves serial, but furnish the rationale of the serial construction. If you speak of time and space, for example, as pure quantity, there remains, as we have already pointed out, the problem of stating the relation of time and space to the general concept of quantity, on the one hand, and to show their differentia with reference to each other, on the other hand; that is, the whole problem of definition remains. In what, in other words, lies the difference in our purposive attitude in evaluating space and time?

To speak first of time. What difference does time make to the realisation of our purposes? Energy, we have seen, stands for constancy of process—for stable types of prediction. And there is a degree of constancy of stuff or we could not have science. But, on the other hand, it is a characteristic of our concrete world that it does not stay as it is. We must recognise fleetingness—growth and decay in much of reality. Constancy, in our practical experience, seems at best relative. Hence we must recognise the attribute of time. It is precisely because the universe is in perpetual flux, that the task of science — the singling out of certain leading identities which enable us to find our way amidst the ever novel and different—becomes so significant. In the frozen block-world of Parmenides we should have no need of science. The constancy aspect is limited by the flux aspect. And while we must recognise the former as real, it seems but meagre in extent beside the flowing world of protean detail.

While, again, it is convenient, for certain abstract purposes of description, to reduce time to quantity, this must not blind us to the nature of the processes which we intend and from whose essential character we have abstracted for the partial purpose. I insist that what we mean by the differences time makes to our purposes is not stateable as mere *units* of chronology—the intervals of the clock. There must be flow,

movement, or we would not go to the trouble of inventing units. This movement, even in the measurement of time, ever belies our static definitions.[1] Suppose that nothing really happened—no running down of energy, no being born or growing old, no change in values. In such a world we should indeed declare time to be no more, to make no real difference. Or rather we should have no concept of time at all. What makes time real to us is that it necessitates new judgments, whether because of transformation and novelty in the purposive meaning which evaluates or in the object which is evaluated. So long as this is the case we cannot express reality in merely static categories. Our quantitative devices are instruments to adjust ourselves to this concrete flow.

It matters not, for this purpose, how you ultimately conceive the stuff of the world. You may conceive the process as the rearrangement of physical entities. Even then you must have something besides the bits and their position to account for the process of the perceptual world. I do not see, myself, how the bits can be indifferent to the rearrangement they must suffer, except as they are recognised as merely our conceptual models. But whether you conceive the stuff of reality in the last analysis as atoms and electrons or as purposive systems of meanings, the question remains: When you have thus conceived reality, why should it slip away? Why does it not remain chained in the present, as Parmenides would say? Why should there be rearrangement, whether a running up or a running down process? As the world has no beginning, neither process can be absolute, for then the world must have run its course countless ages ago. The theory that the world tends to an equilibrium or an equal distribution of heat, as implied in Spencer's formula and the second law of thermodynamics, presupposes a finite creation of the world.

If you say, again, that the present rearrangement is the result of previous rearrangement, and so on *ad infinitum*, why should there be rearrangement at all? Why should not our positional values remain fixed? Why should something creep into our equations, whether subjectively or objectively, so as to make them false? If you insist that reality remains fixed, there at least remains the appearance of rearrangement in the subject, and that is part of reality and must be met.

Given, on the other hand, time, as a real character of the world, you can account for the transformation of values, the

[1] See "Time and Reality," *Psych. Rev.* Mon. Series, Macmillan, 1904, pp. 23 and 24.

instability of positions or the falsifying of our judgments, which is what it all amounts to in the end. You can also furnish the rationale for our serial construction to meet such a character of the world, while you cannot derive the time character from the concept of series. The construction of time infinities is a secondary affair, and can neither explain nor invalidate the real time character. We should not say that things move in time. This is putting the cart before the horse. Our serial construction is made necessary, on the other hand, because of the transformation of our facts and values. Time furnishes the limiting value of certain serial constructions, such as past and future without which they would be meaningless.

It is inverting the real situation to speak of contents as carried over from one moment to another or as passing in and out of time. What really takes place is that some contents remain constant, others come and go. Our psychological moments chase each other and fade like the shadows on the mountains on a cloudy day, yet withal some constancy of outline—of tendency and content—remains by means of which we can realise their fading and fleeting existence. The more permanent contents furnish the background upon which the fleeting ones appear and disappear. Some of the latter observe a certain rhythm. In the case of the earth clock, and our artificial time-pieces based upon it, we have socialised this rhythm, relative though this is in the end to the process. Then we use this rhythm to measure the enduring contents, with their passing or accumulating increments. Having invented intervals we can divide these at will, even to infinity. We then invert the process and imagine that the contents run through our artificial divisions. The latter, however, have no effect on the real overlapping or change. They are an after-thought.

Space.

And now a word about space. If time makes the difference of transformation to our concrete realities, space conditions translation. If time makes an intrinsic difference to our processes, space makes an external difference. The character of space, in other words, is such that it does not interfere with movement. If space offered resistance, geometry, which is based on *free mobility*, would be impossible. It matters not for our purposes whether space be actually empty or not. It is convenient, for scientific and practical purposes, to posit space as a limit of exhaustion and as the absence of resistance,

i.e., to assume a space zero. Only thus can we state Newton's first law of motion. Moreover, if we can approximate to such a limit, it must be as objectively real as though we had actually attained it.

We cannot rule out space by mere *a priori* considerations. Thought must follow the facts and not dictate to them. Whatever we must acknowledge as real cannot fail to be conceivable. And pure space seems to be more than a conceptual limit. Interstellar space seems to be practically pure. The rays of light are, so far as we know, not interfered with in any way until they strike solid bodies. Michelsen's careful measurements indicate that the earth rotates as though it moved in empty space. What is true in the large may be equally true in the minute. Thus the compressibility of the atom as indicated by the experiments of T. W. Richards seems to point to space intervals in the elementary structure of the universe. Whether such observations as regards the existence of pure space prove final or not, this does not invalidate the reality of space as the condition of the energetic interactions in space.

A more positive characteristic of space than that of free mobility is that of *distance* or externality of energetic centres. As distance, space conditions the equations of the astronomer and the realisation of our human social purposes. For even though our purposes do not occupy space, they nevertheless operate in space and space makes a difference to their realisation. If from Kansas I wish to communicate with a friend across the sea, it makes a definite difference as regards the kind of communication and the sort of relations that are possible between us, that he is some thousands of miles away.

Spatial distance does not of course prevent energetic overlapping of centres. In the case of my friend it is true that my purpose to communicate may become continuous with certain physiological processes, and these in turn may become continuous with certain physical energies which in turn span the distance between me and my friend. But the overlapping is different and the realisation of the social purpose is different because of the distance. No mystical monism can remedy this difference. No mere intellectual change of point of view can alter the practical situation in which space figures as one condition.

We must, of course, be careful not to confuse the real space condition with our psychological or logical perspectives with their ideal distinctness or externality of parts. *Things* cannot move in an *ideal* system. Serial space is a construction—an after-picture to symbolise the relations of

things, whether physical masses or geometrical figures or self-conscious individuals, in zero space. If space were merely an ideal system, distance and free mobility would both be figurative without any reality for the figure. If we admit a real zero space, we can easily account for phenomenal or serial space, but not *vice versa.*

I grant cheerfully that all our quantitative measurements are relative. Our serial constructions, our geometrical as our chronological models, are our tools by means of which we strive to meet the actual nature of the world. But I do not see how any mere contradictions in our concepts can rid us of characters of reality which condition all our real purposes, whether as regards transformation or translation.

Consciousness.

It is convenient to treat consciousness, in the sense of awareness or interest, as a unique attribute. It is absurd to suppose that our conative attitudes and organised meanings become atoms and molecules when we are not aware of them; they change, not in stuff but in value when they are illumined for an instant by interest. Consciousness is a new character added to our conative purposes under certain conditions of intensity and readjustment. The conative purposes themselves may remain as constant as individual existence. They may even become permanent parts of social history.

Consciousness or awareness is a neutral light. It does not create distance nor does it create meaning. It may be an awareness of meaning or an awareness of sensation. In our developed experience it is both. It gives subjective and unique value to facts and their relations. To make such awareness possible, there must pre-exist, as conditions, on the one hand, the object-context of which we become aware, and on the other hand, the system of conative tendency which forms the subjective condition of awareness. But neither the object-context nor the system of tendency is as such awareness. When interest is lighted, under its peculiar conditions, a new relationship to the organism originates which cannot be reduced into other existential relations such as temporal, spatial, causal, nor into logical or æsthetic relations, though these now come to have subjective value.

Consciousness thus conditions the relation of being felt. It converts what otherwise would be a type of mere interaction into realisation. What is realised may be an external meaning—a proposition in Euclid. It may be an electrical shock. It may be a relation such as distance. What is

realised need not be experience stuff. It includes not merely experience transition, but space transition. It may be any kind of energy or relation. On the other hand, a meaning may be as objective or external to consciousness as space. We do not make Homer's meaning or the Sistine Madonna, when we become conscious of it, any more than we make the distance from the earth to the moon when we take account of it. Consciousness in any case is a gift which for its condition presupposes on the one hand conative tendency, on the other hand the shock of a stimulus—a situation to be met whether intra- or extra-organic. A mere continuity or succession of objects is not a consciousness of a continuity or succession. Awakened tendency, or interest, is also required. And then the content may come in temporally discrete pulses of experience.

Thus in being conscious there are always end-terms ; and one of the end-terms must be a conative system of tendencies. The terms need not be a logical subject and object, though the exchangeable character of the end-terms in this case does not prevent them from being, in the particular situation, real end-terms, whichever term the conative interest may be momentarily identified with. The end-terms may even be blind instinct on the one hand, and any fascinating stimulus on the other. But one of the end-terms is always conative in character. Consciousness is always *interest.*

Consciousness has been confused on the one hand with its conditions, on the other with its species. It has, in the first case, been regarded, as by the materialist, as a product or effect of chemico-biological causes. But the materialist himself has admitted that it is not comparable with what is ordinarily meant by effect. It is rather an epiphenomenon—a miracle added to the process, without making any causal difference to it. On the other hand, we may with the idealist regard this awareness as everywhere and always present and indissociable from the contents of reality. But here we are dealing with an assumption which seems to run counter to the facts as known in our finite experience. I prefer a third alternative, which indeed is implied in the bankruptcy of the other two, in accounting for our experience. This is that consciousness is an attribute added to our energetic relation of conative tendency and stimulus under certain conditions—a unique gift of reality in its larger sense to some of the interactions of our finite ego. Since obeying regular laws it is no miracle ; since an aspect of all our waking experience, it is no more mysterious than other unique types of reality such as space. Whether it is an abstract attribute of the

universe or is ever-present as an aspect of a comprehensive absolute experience does not matter for the problem in question. In either case, what is a gift to our finite experience pre-exists as a character of a larger reality. This character of awareness spans the whole field of interest from the immediate interest of instinctive attention, where we have the " mere awareness of," to that of the most elaborate apperception or " knowledge about ".

In the second place, consciousness has been confused with the species of its content. It has sometimes been treated as though it meant exclusively logical awareness, to the ruling out of non-logical types. Again it has been treated as though it signifies simply motor awareness, as opposed to ideational. But the stating of such definitions is a sufficient refutation of them. The awareness itself is quite colourless. It is the psychological processes which colour it; and here there is no reason why one process should be given the pre-eminence over the rest.

Form.

I anticipate the most difficulty from the fifth attribute of which I am going to speak, *viz.*, form or direction. We have tried so far to state the universe in terms of four attributes, those of stuff or energy, time, space and consciousness. But none of these attributes answer the question: Does the process have direction, or is there validity in the flux? This is not accounted for by stuff, for the stuff character does not contain its own measure. It is precisely because we recognise that the process is not what it ought to be, because our finite structures seem relative, that the question of validity is raised. The question is not answerable in terms of time, for time merely means transformation. Whether transformation towards chaos or towards unity is not answered by time. It is not stateable as space, for while space conditions the realisation of meaning, it does not make it valid. You cannot reduce the demand for form to mere mechanical sequence, whether psychical or physical, conscious or unconscious. There remains somehow within us the longing for finality, in spite of, yea because of, the fragmentariness of our finite meaning. The merely relative fails to satisfy us.

Valid relations are a distinct type or genus from consciousness with the motley array of existences which it reveals. In the first place, our awareness may be bound up with error and illusion. That it largely is so in our experience is attested by the whole story of science. In the second

place, valid relations may exist without our being conscious of them. We do not originate Euclidian geometry by becoming aware of its logical relations. While valid relations presuppose mind and also awareness at some time, we do not have to be awake all the time to keep the argument valid. And the long buried past, when once brought to consciousness sometimes is found to be more valid than our present cogitations.

Validity implies a constitution, different from the sequential or causal, in the light of which we criticise that which happens and strive to establish clearness and distinctness in the midst of the seemingly confused relations of experience. This idealisation of life, this attempt to establish the ought in what is, must be taken as a unique type of evaluation. When we insist that there ought to be truth, beauty and goodness, in spite of the relativity of history and our individual judgments, we have at least implied a limit, a direction of history which is not relative. Else all our judgments would be equally meaningless, and there could be no degrees of worth, as in the dark all cows are grey.

The absolute idealist insists that in the absolute experience we have such a standard. This absolute experience is even now shared by us. It is this that gives rise to our consciousness of fragmentariness, which accounts for our finite sense of failure, and of which we are even now conscious as the final truth, the purpose eternally fulfilled. But the irony of history gives the lie to any such assumption. The absolute itself, as our concept, is subject to the transmutation of time. It is the expression of the finite now. Each stage of the process must create its own absolute, find its own satisfaction. The absolute, therefore, is for us at any rate merely a logical ideal. Epistemologically, it is relative. The concept of it, too, presupposes direction for such validity as it has.

That the idea of direction is valuable as a regulative idea or limit, cannot be doubted. But can we also attribute ontological reality to the same? Or is it merely a hypothetical limit, the index of our ideal strivings? It seems to me, if it is required to give meaning to our relative and fragmentary purposes, that it must be at least as real as those purposes thomselves. The straight line must be at least as real as the numberless variations of curvature of which it is the limit. And it is worth more, for without it there could be no such thing as measure. And so with our more general ideal demands, as contrasted with the world of existential processes.

To guarantee the validity of process or to furnish the basis for science, virtue and beauty, the form must be selective, that is, must somehow condition the survival of structures. Only thus can it satisfy that demand for finality which the finite process at any one time fails to fulfil. This does not mean that every item is predetermined by a final cause or Idea. It need only mean that, in the changes and chances of the cosmic process, in the fluctuations and mutations of life, certain ideals of clearness and distinctness are enforced by the universe, however much beyond our comprehension such operation may be. This would accomplish in the large what our selective will as a fragment and evolution of the universe strives to accomplish in the small.

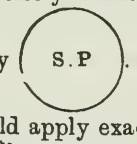
That formal selection may condition survival we know from experience. Evaluation in terms of ideals is an important condition in social survival. Human beings are socially approved, not so much for their size, weight or strength, as for their satisfying certain ethical, æsthetic and intellectual standards. They may, for example, be selected for their beauty rather than their strength and thus continue the race. This holds to a certain extent in animal selection as well. And in the survival of plant life and even of certain conditions of inorganic nature—the configurations of hills and valleys within our human control—form often plays the most important part in our selection. If the universe is interpenetrated and controlled in the last analysis by a master mind—the fulfilment of our ideal demands—formal value, rather than quantity of energy, may be the final basis of survival and eternity.

These attributes, while they are ultimate or irreducible kinds, differ from the parallelistic attributes of Spinoza in that they all make a difference to our creative purposes, whether they make any differences to each other or not. Hence they do not involve an epistemological contradiction. They at least overlap *as known*. They also overlap in other ways. Space makes a definite difference to interacting energies in space. Time again conditions the existence of process at all, instead of the petrified world we otherwise should have. Consciousness makes subjective realisation of a world possible, while form makes it possible to understand and appreciate such a world.

V.—DISCUSSIONS.

ANALYSIS OF CATEGORICAL PROPOSITIONS.

I.

I SHOULD like to be allowed to make a few remarks on Mr. Broad's reference to my view of the analysis of *S is P* propositions in his interesting notice in MIND, N.S. 82, of the *Proceedings of the Aristotelian Society*, 1910-1911. Mr. Broad remarks that on my view "the phrase 'identity of denotation' must be taken to mean that some part and it may be all of the denotation of one term is identical with some part and it may be all of that of the other". What I hold is, that in *S is P*, S and P (whatever they stand for—*e.g. All R* (*Some R*), *Some Q*) are the *Terms*, and that S and P are in all cases precisely identical in denotation. *S is P* may be diagraphed by 

. But to *Term-names*—in this case R and Q—I could apply exactly what I have quoted from Mr. Broad. What this really expresses is the demand for identity of denotation that is conveyed in the familiar requirement that the Middle 'Term' must be 'distributed'.

In support of my analysis of *S is P*, as against Mr. Russell's objection, Mr. Broad is of opinion that to say that in the assertion: Scott is the Author of *Waverley*, the object denoted by 'Scott' is identical with the object denoted by 'the Author of *Waverley*,' does not involve direct acquaintance with the object called 'Scott'.

He thinks, however, that I have not met two independent objections urged by Mr. Russell against my analysis: (1) that some 'descriptive phrases' such as *the round square* have no denotation; (2) that the analysis leads to a vicious infinite regress.

In answer to (1) I would once more urge that unless a name *applies to something* (and that is what I understand by denotation) it cannot be used *in assertion*—and unless it has intension, one name will serve as well as another, it does not matter which we use.

With reference to Mr. Broad's suggestion that the phrase 'round square' is as destitute of 'subjective intension' as of 'denotation,' this seems to be true. The hindrance to thought here is

similar to that which we encounter in terms of the form *A-not-A*, and propositions of the form *A is not-A*. Yet we do sometimes reckon these contradictory locutions as terms and propositions respectively, and *A is not-A* is in the form *S is P* and may, so far, be analysed as an identity of denotation with diversity of intension. Something more than this however is wanted, and it is I think to be found on the line of thought indicated by Prof. Stout in his article on *The Object of Thought and Real Being* in the *Proceedings of the Aristotelian Society* for 1910-1911. He says (p. 193) that "the relativity of possible alternatives to variable generalities seems to supply a key to the difficult problem how impossibilities, as such, can be objects of consciousness. It would seem that an impossibility can be thought of only because, from another point of view, it is a possibility. We may take, as a crucial case, the formulation of the law of contradiction. In one sense, we cannot apprehend the union of two contradictory propositions in a single proposition; for it is in the act of failing to do this that we become aware of the law of contradiction as self-evident. On the other hand, if we could not think of the union of contradictory propositions at all, we could never recognise it as an impossibility. The solution of the difficulty seems to be this: The general character of the propositions, considered merely as propositions, leaves open the alternative possibility of their being combined or not combined. Hence, from this point of view, we can think of their union as a possible alternative. It is only when we go on to develop our thought in the attempt to bring before the mind the special form which this alternative would assume under the special conditions, that we find our path barred."

I may perhaps compare with this the following sentence from an article of my own in MIND:—

"I should . . . say that in order to predicate non-existence in one sphere it is necessary to postulate existence in another. If I say: (1) Dragons are non-existent, or (2) Round-squares are impossible, I do of course mean to imply the *non-existence* and *impossibility* of Dragons and Round-squares respectively—but it is non-existence and impossibility in a certain region that is neither all-embracing nor even that to which I primarily refer. Unless I refer to *some*thing, existent *some*how, in *some* region, what is it of which I predicate non-existence or impossibility (within a given region), what is it which I exclude from those regions to which 'non-existent' and 'impossible' refer? If a thing is non-existent everywhere, what does the exclusion of it from a given region mean?" (MIND, 1893, p. 454).

In: The existent round square does not exist, we are referring to two regions or orders of possibility or existence which do not coincide. A round square must 'exist' after some fashion in order to be an object of thought, but it has not the more specific possibility of being actualised in space which we are accustomed to assign to

geometrical figures. In: The existent square inscribed in a circle is existent, the two possibilities (the vaguer and the narrower) do coincide.

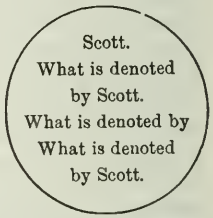
With regard to objection (2) the possibility of an "infinite regress" seems to be an absolutely necessary condition of any *general* analysis of *S is P* propositions because that analysis itself can be expressed and applied endlessly. My point is that *every* proposition of form *S is P* can be analysed in a certain way. It is not a valid objection to this to say that a Categorical, complicated by unnecessary repetitions of the analysis but still Categorical, remains amenable to the analysis. The analysis would not be general unless this were so.

If I say that the import of, *e.g.* Scott is the Author of *Waverley*, is to assert identity of denotation with diversity of intension, I can of course also say that: What is denoted by what is denoted by Scott, is identical with what is denoted by what is denoted by Author of *Waverley*. As Mr. Broad suggests, the repetition in Subject and Predicate is ineffective, and

(1) Scott.

(2) What is denoted by *Scott.*

(3) What is denoted by *What is denoted by Scott* have all three the same identical denotation.



(1) Scott is the Author of *Waverley.*

If my analysis (as far as denotation is concerned) is applied to this, we get:—

(2) What is denoted by 'Scott' is identical with what is denoted by 'Author of *Waverley*'.

If the same analysis is applied to (2) we have:—

(3) What is denoted by *What is denoted by 'Scott'* is identical with what is denoted by *what is denoted by 'Author of* Waverley,' and so on. We have simply a repetition, for each successive more complicated proposition, of the analysis adopted.

I think that a regress equally 'infinite,' equally inevitable, equally innocuous, equally useless, would emerge in the case of any propositional analysis treated in the same way—*e.g.*, Mill's, according to which "Whatever has the attributes connoted by the Subject has the attributes connoted by the Predicate," or Hobbes's, according to which "The Predicate is a name of the same thing (or things) of which the Subject is a name".

Both of these come very near my analysis. The only difference between Mill's (What has the connotation of the Subject is what has the connotation of the Predicate) and mine is, that Mill's has a rather narrower application—that is, it applies to Universal affirmative Categoricals, which have general names for both Subject-name and Predicate-name. If Intension is substituted for Connotation, it *is* my analysis—for in all *S is P* propositions S and P are not intensionally the same, and any term used in a

proposition, if it is to express or convey any meaning at all, must have *some* Intension.

According to Hobbes, the Subject and Predicate in any proposition are names of the *same thing, i.e.* they have *the same* denotation or application, and if these names have even the minimum of difference in Intension (which they must have unless the proposition is of the form *A is A*) then again the analysis coincides with mine—there is Diversity of Intension with Identity of Denotation. It would seem too that in defining a Synthetic Proposition in which both S and P are connotative, the acceptance of my analysis is unavoidable.

II.

Perhaps I may take this as an opportunity of referring also to Dr. Bosanquet's Note (in the second edition of his *Logic*) on my analysis of *S is P* propositions, and the suggestion that this analysis should be regarded as a new ' Law of Thought,' a law of Significant Assertion. Dr. Bosanquet says: "The substitution of S is P, as the general formula of thinking, for A is A, which, taken as such a formula, is meaningless, will I hope be adopted by logical theory and practice. By dealing with a difficulty which so great a logician as Lotze could not overcome, the suggestion shows itself to possess a considerable value." But Dr. Bosanquet has fault to find with the view that what is asserted by propositions of form *S is P* is "difference of Intension along with Identity of Extension". Apparently however he would agree with Mr. Bradley, by whom (he says) "the same analysis has been repeatedly urged *totidem verbis* . . . but with restrictions".

It is certainly the case that Mr. Bradley has statements which seem to me exactly to express my view, but (1) according to Dr. Bosanquet this view is asserted by Mr. Bradley "with restrictions," whereas I protest against restrictions, (2) in close connexion with the statements which coincide with my analysis, Mr Bradley has other statements on the subject with which I find it impossible to agree, *e.g.* on page 167 of *The Principles of Logic* he says: "We may briefly sum up the matter thus. The only way to read the *whole* judgment in extension is to take it as asserting a relation of identity between *different individuals*. *Two individuals*[1] are one though their attributes differ." And on page 29 (the other page of Mr. Bradley's book to which Dr. Bosanquet refers) it is said that "all judgment is the attribution of an ideal content to reality . . . thus in ' A precedes B ' this whole relation A – B is the predicate, and, in saying this is true, we treat it as an adjective of the real world . . . the reality to which the adjective A – B is referred is the subject of A – B, and is the identity which underlies this synthesis

[1] Italics mine.

of differences." Each of these quotations gives an account of *A is B* propositions which differs importantly from my analysis.

The story from Thackeray in Dr. Bosanquet's *Essentials of Logic* (p. 140) to which he here refers, tells, it seems to me, entirely in favour of my analysis. In this case, as Dr. Bosanquet remarks, "the inference depends solely on individual identity".

When Dr. Bosanquet says "That one intension can be—involve or imply—another is a possibility which, as I understand, Miss Jones absolutely and in principle denies (cp. however p. 46 of her work)," I would observe (1) that though I do not take *be* as equivalent to *involve* or *imply*, and do not think that one intension can *be* another, I believe firmly that one intension may *involve or imply* another, and I have stated this emphatically in, *e.g.*, the chapter on Induction in my *Primer of Logic*. For instance, I say on page 74 "in all these Methods, uniformity of causation involves uniformity of co-existence. If we have seen one animal dosed with arsenic and subsequently die, and hence conclude that another animal called by the same name, and dosed with an equal amount of arsenic, will die, is not our inference based upon the assumption of a certain constant coinherence of characteristics, both in the animal and in the poison—a coinherence of such a kind that when the two subjects are so collocated as to act upon each other, a result similar to that produced in the first case will be produced in the second also? If the properties of this arsenic are different from those of the other, or if the second animal, though looking like the first, has a different internal constitution, there is no reason why death should result (cp. Mill, *Logic*,, book iii., chap. xxii., § 2). This sort of uniformity—a uniformity primarily of co-existence—it is which we look for, and of which we constantly discover fresh cases, these enabling us to predict that if Subjects having certain characteristics are collocated, certain changes in them will take place. Laws of *Succession* in events seem thus to depend upon laws of *Co-existence* of characteristics in Subjects. On the other hand, we cannot predict new collocations of Subjects of Attributes.

It might be argued, further, that not only is every characteristic invariably accompanied by a certain other characteristic, as Bacon surmised, but also that every kind of characteristic is one of a unique group with which it is invariably and inseparably connected. We certainly act as if we believed this; from the perception of a mere odour, we infer unhesitatingly the neighbourhood of roses, or jessamine, or lavender, of coffee or tea, hay, ripening corn, freshly fallen snow, or a beanfield; from a mere vocal sound we infer the neighbourhood of a man or woman, or child, or bird, or dog—or even a particular individual in a particular mood. A mere touch or taste will enable us fully to describe objects of a familiar kind: the mere view of a thing will enable us to say what it is called, what other characteristics it possesses, how it will behave under a great variety of circumstances. For instance, if I see an

object looking exactly like what I am accustomed to call a squirrel, sitting on the top bar of a stile, or on a branch, I unhesitatingly say that it is a squirrel, and infer that if I startle it, it will escape with the kind of movement common to squirrels; that if I shoot it and examine its structure, I shall find it to have a backbone, a brain, etc. No two things are alike only in visual appearance, or only in smell, or only in taste, and so on. From one bone a whole skeleton may be made out, from one specially modified symptom the whole diagnosis of a disease." I have said on my page 46, to which Dr. Bosanquet refers, that "the identity-in-diversity analysis offers no obstacle to the view that the intension of the Predicate is inseparable from that of the Subject. . . . In fact the inseparability of the intension of P from that of S quite inevitably involves *identity of denotation.*" The only way in which intensions can appear as inseparable is by always having one and the same identical denotation. But we sometimes find intensions conjoined which we do not *know* to be inseparable.

I think it is probable that, as Dr. Bosanquet says, "conjunction covers connexion" always (*cp.* my *Primer of Logic*, p. 74), but we do not always see or know that it does. But whenever we say *S is P*, we do assert a conjunction of the intensions of S and P in

and certainly whenever *S is P* is a Universal Proposition, we are aware that the assertion of denotational coincidence of Subject and Predicate can only be made in reliance on a universal connexion of the intension of S with the intension of P.

I of course recognise Intensional Sameness, Oneness, Unity, though I am anxious to keep the term *Identity* for *Denotational* One-ness. Also I believe that a certain intensional one-ness underlies the intensional diversity of S and P both in *S is P* and in *S is not P*.—I should wish to disclaim the inference which Dr. Bosanquet draws from the rather hasty and unguarded passage in a bracket on pages 41-42 of my *New Law of Thought* to which he refers.

E. E. C. Jones.

THE 'WORKING' OF TRUTHS AND THEIR 'CRITERION'.

Miss Stebbing[1] is indeed a formidable antagonist. She refuses to take my word for it that I know what my doctrines mean, and insists that I must mean something nonsensical which she has read into an *obiter dictum* of James. And rather than admit that she has made a mistake, she accuses me of inconsistency. It is not, therefore, easy to argue with her. But as her misconceptions are widespread, and continue to be assumed, without misgiving or sense of impropriety, by eminent philosophers,[2] I must make another attempt to remove them.

(1) I will begin by pointing out that Miss Stebbing has not, so far, gone any way towards proving that the convertibility of 'truth' and 'working' is essential to pragmatism, either by her examples or by her arguments. Her first example proved nothing, as she now admits by implication (p. 250). Her defence of the second (pp. 250-251) strikes me as bold, but neither judicious nor logical. She urges that though it did not profess to be James's own doctrine, but only his condensation of mine, yet James had on a previous page said his doctrine was identical with mine, and that therefore it did not seem to her 'essential' to distinguish them—even after I had expressly repudiated the sense she had put upon it. Let us consider how this looks when we substitute neutral symbols for pragmatists capable of any logical atrocity. Is it not very risky to accuse A of an error B is supposed to have committed, because

[1] *Cf.* No. 86., p. 250, and No. 83, p. 471. I need hardly say how much I regret my failure in No. 84 to detect her sex, and that of the Editor to correct me.

[2] It is instructive to compare Prof. Alexander in the same number, pp. 182-183. He agrees with Miss Stebbing that pragmatism may be reduced to the formula that "truth is true because it works," and so in ignoring the controversial significance of the demand for a testing of alleged 'truths' (*v.* below *sub* (4) *c*), but differs from her radically in holding that "what works practically may be regarded (if the proposition is fenced by proper safeguards) as true. But we cannot say that everything which is true works practically." *I.e.* he *denies* (what Miss Stebbing admits) that 'all truths work,' but admits (what I contend), *viz.*, that until certain 'workings' are allowed for, it cannot be asserted that 'all that works is true'. It would be interesting to learn what authority Prof. Alexander claims for his interpretation of pragmatism. He can hardly have extracted it from me, seeing that it exactly inverts my contention. He must, therefore, have got it from James, and, if so, differs decisively in his reading of James from Miss Stebbing.

A has once made a general remark that he agrees with B? But what shall be said of the imprudence of insisting, on the strength of this, that A has committed the error, when B positively denies that he himself has committed it? Is A's assertion about B's meaning to stand against B's own, and a brief summary of B's works against the actual text? Moreover is not the inference utterly unwarranted in logic, even on the facts alleged? A has written a passage C about his friend B's doctrine. Both are thereupon charged with holding the doctrine D, because A has somewhere said that his doctrine and B's were 'identical' (absolutely, or with a difference?). But B denies both that he holds the doctrine D and that the passage C contains it. Does it not follow that *neither* A nor B can hold it, and that *both* must be acquitted?

(2) Of course Miss Stebbing may think I am equivocating, and say I do not know either my own mind or my own writings when I deny that I have anywhere alleged or assumed the convertibility of 'truth' and 'working'. But she must permit me to say that she has not made good her claim to be a better authority on what I mean than I am myself, nor to possess psychological infallibility as a mind-reader. In token whereof I may point out that she is no less mistaken in her inferences from the incriminated passage than in her citation. She argues that "it is surely evident that Dr. Schiller thinks they (truths) are attained by 'working,' and are true *because* they work," and that I get at my notion of "the essence of truth" in this way.

In reply I deny both her facts, and the logical significance she attributes to them. It is not true that I derive the essence of truth from its working (*cf. infra sub* (3)). It is not true that because I think that our current 'truths' have (mostly) been reached by experience of their working, I must hold that whatever works is true (in *her* sense, *i.e.* immutably); nor does this follow from my holding that a truth is 'true *because* it works'. This last phrase I can admit without damage to my position or inconsistency, because its intention is merely to *deny* that truth-claims which do not work are true at all. It does not, therefore, mean the same thing for me as for her. To Miss Stebbing it seems to involve the convertibility of 'truth' and 'working,' because she has assumed that 'consequence' and 'ground' 'reciprocate,' and also because she has (probably unconsciously) taken true in an 'absolute' sense; but a little reflection, or a little study of pragmatist logic, should convince any one that both these assumptions are pragmatically inadmissible.

In the first place, it is clear that as working admits of quantitative differences and is a question of more or less, 'truth' also must have a quantitative aspect, and the difference between it and 'error' cannot be absolute. Hence the connexion between a working A and a truth (claim) B which it supports can never be

an exclusive one. It must always be necessary to consider also whether the observed working would not fit in as well or better with truth-claim C, and often whether the working D connected with truth-claim E should not prevail over A, and be judged 'truer' because more important. Secondly, Miss Stebbing does not appear to be aware that no amount of 'working,' 'validation,' verification, or 'confirmation,' can ever prove the truth of anything in *her* sense, *i.e.* absolutely. For no hypothesis, however strenuously and well it worked, can ever become a 'formally valid' and 'absolute' truth in this way; the method is unavoidably based on the formal fallacy of 'affirming the Consequent,' and it can never be validly inferred from the fact that a theory works that it is therefore 'true' (absolutely). Hence it is an inevitable corollary of the belief in absolute truth that absolute truth cannot find lodgment in a human mind, nor be attained by way of human science.

But it was precisely our perception of this logical *impasse* that led us to reject the notion of absolute truth with all its appurtenances. It seemed to us to end in a *reductio ad absurdum*, and in a gratuitous plunge into scepticism.[1] We were led, therefore, to examine how in fact belief in the accepted 'truths' grew up. We found that this involved many interesting psychical processes, which had been ignored in all the extant theories of knowledge and gave the lie to many of their pet assumptions. We found, *e.g.*, that every thought was essentially a *personal experiment* that might succeed or fail, and that whether it did the one or the other depended on its consequences. But it seemed clear that 'true' was the term appropriated by language to the success, as 'false' was to failure, of such experiments. Hence 'truth' and 'error' were conceived by me as being essentially *valuations*.

Of course both 'success' and 'truth' are relative terms, both on account of their genesis and on account of their connexion. *Absolute* 'success' is found as little as absolute 'truth,' and for the same reason. There is no finality about either, and no need for it. All 'truths' remain (preferred) truth-claims, and retain an infinite appetite for assimilating further 'confirmation'. It is because of this infinite progressiveness that no knowledge is logically 'absolute'.

But there does come a point, alike in the individual's experience and in social opinion at any time, at which it seems that certain truth-claims have received confirmation enough to make them *pragmatically certain*. These form the reigning truths. But they never form a closed oligarchy or an immutable system. Merit can force its way into their ranks, and inefficiency entails degradation. Thus, though their position is (psychologically) unchallenged, it is never (logically) unchallengeable. So their *de facto* acceptance

[1] *Cf.* in the same number of MIND as Miss Stebbing, Capt. Knox, pp. 238-241. The whole article is well worth pondering by those who are not absolutely certain that they have fathomed pragmatism.

does *not* prove their absolute truth *de jure*, and it can *not* be said that because they work they are *absolutely* true. They are *called* true, because they work, and there is no sense in calling anything true for any other reason; but the progress of knowledge may nevertheless supersede them at the next step.

(3) It should be clear from the above why I can appeal to 'working' to attest the (pragmatic) 'truth' of a doctrine, without imagining that any (absolute) 'essence of truth' is being established. The whole notion of such an 'essence,' in the sense of something indefeasible and immutable, which makes a thing what it is and without which nothing can be itself, is entirely foreign to pragmatism. For us the 'essential' means merely what is important for any purpose. The old-fashioned essences do not exist, and would be useless if they did; for they would be unknowable. Objections, therefore, which assume that truth must have an essence, or that, if not, it is the duty of pragmatism to supply it with one, simply do not concern us. I can only smile at the *naïveté* of Miss Stebbing's contention that "if truths have only one property in common surely that property must be of the essence of truth, and cannot belong to anything that is not true" (p. 251, n.).

(4) Nevertheless this quotation reveals what I suspected already in my first paper (p. 535) to be the real source of her misconceptions, *viz.*, her notion of a 'criterion' of truth. A 'criterion' evidently means to her something very solemn, which pragmatism has no use for. It is not indeed anything quite so lofty as the inscrutable 'nature' of truth, but, though derivative from that, it attaches itself to everything that is true, and "cannot belong to anything that is not true". That is the only allowable definition of a genuine 'criterion,' and to inquire whether anything does in fact exist to exemplify it would be indelicate. It may however be pointed out that Miss Stebbing assumes: (*a*) that there is (or ought to be) a 'criterion' of this kind, or at least that it is not inconceivable; (*b*) that pragmatism claims to have discovered it; (*c*) that it wishes to 'test' truths with it; (*d*) that the testing it speaks of is not 'intelligible'; (*e*) that it fails to distinguish truth from error; and (*f*) that her notion of the 'nature' of truth is intelligible. I cannot but think that on all six points she is gravely mistaken.

As to (*a*) she admits (p. 252) that no intellectualist has produced such a criterion. All intellectualists would now I think have to admit that they have utterly failed, so far, to vindicate their faith in the existence of absolute truth by discovering any test that would discriminate it either from the 'truth' which is accepted because it has worked, or even from 'error' or 'illusion'; though many, for some inscrutable reason, appear to be quite proud of their failure to devise such a criterion. But this failure hardly seems the right premiss for the inference that therefore such a criterion must exist *in rerum natura*; on the contrary, if no one

has ever found one, and if those who thought they had have always been deluded, is it not a fair inference that the theory which demanded one was probably wrong?

(*b*) This, of course, is the inference which pragmatists have drawn from the situation, and is my reason for denying that we alleged a criterion in Miss Stebbing's sense. She will find it quite as difficult to quote from us for a recognition of such a 'criterion,' as for the convertibility of truth and working. For we got rid of the duty of providing an absolute criterion, when we discarded 'absolute truth'. Since then we have spoken of it only *pour rire*,[1] and not used it ourselves.

(*c*) What we speak of is *testing truth-claims*, and this is a very different affair from Miss Stebbing's 'criterion'. We think further that the so-called 'truths' of intellectualism are hopelessly vitiated by an all-pervasive 'ambiguity,' and that 'formally' (*i.e. verbally*) they include 'lies,' 'errors,' and in short all truth-claims, along with accepted truths. This we regard as highly inconvenient for scientific and other purposes, and we censure intellectualism for contenting itself with such formal 'truth' and for *not even attempting* to sift the 'true' (in any significant sense) from the 'false'. It seems to us that this is highly *uncritical* as well as inconvenient, and calculated to render all theorising about knowledge futile and unmeaning.

We, on the other hand, are determined to effect this sifting so far as possible, or at least are not too proud to observe how it is done. It is done by *comparing the values* of different truth-claims, and discarding the less valuable as 'false'. We note that this process goes on continuously, and that in consequence the value of the accepted 'truths' is steadily rising. Hence we attribute both 'practical' and 'theoretic' importance to this process of testing, and though it never involves any questions of 'absolute' truth or falsity, it does involve a constant purging away of more erroneous and (relatively) worthless beliefs. We are entitled, therefore, to protest against the reception into decent scientific society of any truth-claim, however 'self-evident' it may seem to its advocate, that has not undergone a modicum of testing, and we demand of it a certain record of work done. The dictum that all truths must work is therefore, in the context of our doctrine, a part of this thoroughly scientific protest. It is really *negative* in its purport, and not a positive statement at all, either about the 'nature' or about the 'essence' of truth. It simply means—'You shall not assert the "truth" of whatever suits you without any testing at all'. The *positive* facts which justify this protest are that truth-claims differ in value and that the most valuable available at any time are those called 'true'; but it is a curious habit of our critics to pass over this part of our doctrine in complete silence.

[1] *Cf.* Capt. Knox on Mr. Bradley's "Absolute Criterion" in MIND, No. 54, and Mr. J. W. Snellman in No. 78.

(*d*) I can see no reason, therefore, for regarding this testing of claims, which the pragmatic method demands, as useless because it is not final or infallible, nor as failing to distinguish practically and adequately for scientific purposes between the true and the false.

(*e*) Miss Stebbing's belief to the contrary seems to result wholly from her prepossessions as to the verbal meaning of a 'criterion'. She "fails to see how any property can be a criterion unless it belongs to every instance involved and to these only" and thinks that "in stating that 'working' belongs not only to all truths but also to some things that are not true, Dr. Schiller destroys its force as a criterion" (p. 252). But she fails to see also that the sort of testing I contemplate, and the sciences carry on, is necessary, and is not a whit less useful for not coming up to her definition of a criterion.

(*f*) Ultimately our divergence springs from difference about the 'nature' of truth. I assume that this 'nature' is knowable and may be extracted from the truth-seeking and truth-finding of human minds, and that our *a priori* prejudices must accommodate themselves to the facts of these. She assumes (for no reason that any intellectualist has ever been able to state) that there is an eternally fixed definition of 'the nature of truth,' and that no amount of experience of the discrepancies and absurdities to which in fact it leads can ever entitle us to abandon it. It is part of this definition that (real) truth is incorrigible and that "no 'truth' that requires 'further improvement' is quite 'true'" (*i.e.* absolutely). Of course it is not 'true'—in her sense! That is just the familiar fact of the non-existence of 'absolute' truth. Of course also no one can prevent her from laying down a definition of truth which condemns all humanly attainable 'truth' as false. In that she is only following in the footsteps of the eminent Absolutists who have been preaching so long that nothing short of the whole truth is wholly true, and persuading us to call this doctrine rationalism instead of scepticism. But I would put it to her that this definition of the nature of truth is highly irrational and arbitrary, and not at all 'intelligible' in the end. For why should we insist on defining 'truth' in terms that only stultify all human knowing, and render any intelligible account of its procedures impossible? Why reserve the title of 'truth' to an 'ideal' which admittedly we cannot attain, and which, as I have elsewhere shown, we have to contravene in every act of real knowing? Is it not far more rational to cut our coat according to our cloth? Why prefer to be a sceptic when you can be a pragmatist?

At any rate it is clear that the inconsistencies Miss Stebbing finds in our doctrines she has imported into them herself, by attributing to us a meaning of 'true' which it is the vital novelty of our doctrine to repudiate. This procedure is intelligible only on the supposition that she has failed to understand alike the pragmatic notion of 'truth' and the ambiguity of her own. And perhaps the

latter failure explains the former. For so long as any one rests content with a 'truth' which harbours any falsehood any one may choose to affirm, and thinks that science and life have no right to demand from logic a notion of truth they can use, why should he trouble to amend his familiar phraseology and try to grasp a new conception?

F. C. S. SCHILLER.

ON METAGEOMETRY AND THE SENSE OF DIRECTION.[1]

An interesting and continually recurring problem involved in the philosophical treatment of mathematical method is found in the controversy concerning the interpretation of the various systems of metageometry. It may, therefore, be desirable briefly to state what light is thrown on it by the application of the principles published some time ago in this journal.[2] In that article the opinion was expressed that the axiom of parallels was *a priori* in a sense which it was the object of the article to make clear. The opinion was also expressed that its *a priori* nature was doubted only because its usual statement was not sufficiently clear, and that greater lucidity was still to be achieved. The present short article is an attempt to forward that end. Elsewhere, in a more general study of the principles of mathematical method,[3] geometry was mentioned as the best example of conceptual truths "almost universally applicable to the perceptual world". The non-euclidean geometries, however, were regarded as exceptional, and concerning them the statement was made that the conceptual series outruns the perceptual and gives us conclusions which have no valid meaning in the object world. Such a statement is, needless to say, contrary to the general trend of expert opinion, and the present paper is written to set the matter forth more clearly and more fully.

The crux of the whole problem is found in the treatment of the axiom of parallels. If we can show that it should be accepted in the same sense as the axiom of quantity, there can be no further dispute. Metageometry, then, becomes an interesting methodological problem, nothing more. There are, as a matter of fact, three possible theories. The first is that the axiom of parallels is *a priori*, a view held by Cayley. The second is that it is deriva-

[1] I have pleasure in acknowledging indebtedness to Prof. Alfred Cardew Dixon, M.A., F.R.S., of Queen's College, Belfast, for kindly criticisms which have enabled me to make my exposition somewhat clearer than it would otherwise have been. Such assistance from so distinguished a mathematician is exceedingly valuable to one whose interest in mathematics is confined to the philosophical side. This acknowledgment, however, must not be understood to imply that Prof. Dixon is committed to the views here expressed.

[2] *Evolutionary Empiricism*, Mind, No. 73.

[3] See "Methods of Applied Mathematics," *Journal of Philosophy*, 30th September, 1909.

tive, and can be proved from other axioms. The third is that it is purely empirical, like, shall we say, a value of Young's modulus in a mechanical problem.

Of these three theories,[1] present-day mathematical analysis has shown the second to be entirely untenable. If the axiom of parallels could be proved, it would follow that the non-euclidean geometries would be impossible. The other axioms would be found to be inconsistent with the denial of the axiom of parallels.[1] Now it is a fact of common knowledge that non-euclidean geometries are self-consistent. We have therefore to decide whether the principle of parallels is *a priori* or empirical. Both views, at first sight, present difficulties. Those holding the empirical view, of whom Mr. Bertrand Russell is the most prominent exponent, are involved in the difficulty that, according to their theory, euclidean geometry is in no way truer than the systems of Riemann or Lobatschewsky. The criticism has been put forward against the *a priori* view that, according to the principles of Kant, there is a difficulty in understanding how euclidean geometries are possible at all. There is no doubt that Kant, were he alive to day, would need to define his position more exactly. Not myself holding the Kantian view, I leave it to those who follow him to say whether or no such a restatement is possible. It will suffice for my purpose to point out that my own Neo-Spencerian view, which I have put forward in this journal, is not involved in any such difficulty. According to any view of the *a priori*, however, it is necessary to show that the principle of parallels is capable of statement in such a form that it is bound to be accepted. We must find a statement which cannot sanely be doubted. The complicated fifth postulate of Euclid is certainly not axiomatic, and the clearest substitute, up to the present, is Playfair's axiom. Although this axiom was regarded by Cayley as *a priori*, it has not received universal acceptance. In place of it, therefore, I venture to submit the following arrangement, which seems to me to exhibit the *a priori* nature more clearly than any suggestion I have seen :—

Step 1. Definition of a straight line. *A straight line is one which, throughout its entire length, maintains the same direction.* (This is better than the "lies evenly" definition, and is also better than the common substitute "shortest distance" which is certainly a derivative idea. The essential idea of a line is that of direction.)[2]

[1] The sytem of Riemann denies not only the axiom of parellels, but the axiom that two straight lines cannot enclose a space. Fourth dimensional geometry and the system of Lobatschewsky is consistent with all the euclidean axioms and postulates except that of parallels.

[2] The idea of utilising the idea of direction is not altogether new. The most systematic of previous attempts is that of Captain E. T. Dixon (*Foundations of Geometry*, Cambridge University Press). As, however, it is exceedingly doubtful whether he agrees with the view that the axiom of parallels is *a priori*, it will be well merely to mention that he has written a geometry based on the utilisation of the idea of direction, and to

STEP 2. Axiom. *It is possible to draw two or more straight lines in the same direction.*

Definition: Such straight lines shall be called parallel. (The introduction of the idea of a plane at this stage is an unnecessary complication.)

STEP 3. *Parallel straight lines never meet.* (For if they did they would form an angle and so not be in the same direction. The definition of angle and of rectilinear angle would be the same as in Euclid.)

STEP 4. *Through a given point, only one straight line can be drawn parallel to a given straight line.* (For, if not, they would meet. Step 3.)

The statement of Step 4 is actually, though not verbally, identical with Playfair's axiom, but is reached through two steps of reasoning from a simpler axiom.

To get back to Euclid and to plane geometry, we need to show that two parallel straight lines lie in the same plane. For the purposes of elementary exposition this could be assumed, but, for a more severe logical treatment, it could readily be proved. It seems desirable, therefore, to insert two more steps.

STEP 5. *Two straight lines which meet at an angle continually get farther and farther apart, and the distance between them will eventually exceed any assignable distance.*

It would be superfluous to insert the exact steps in reasoning by which this conclusion would be reached. It will be remembered that the fundamental euclidean propositions dealing with perpendiculars, in fact the whole of the first book up to proposition 26, is independent of the postulate of parallels.

STEP 6. (Definition of a plane as in Euclid.)

A plane can be drawn through any two parallel straight lines.

Proof. Draw a plane through one of the straight lines and through one point in the other. If the direction of the second line does not lie in the plane, it (the line) will continually get farther and farther away from the plane with increasing distance from the point of intersection, because it will get farther from any straight line in the plane that passes through the point of intersection.

Granted this step, it is quite easy to show that all straight lines in a plane, not parallel, will meet.

A few words of explanation are necessary clearly to show the bearing of the previous exposition. It is not the object of the paper to invent a new geometry, but rather to show the character of the

leave it to others to decide what relation, if any, there is between his ideas and those here put forward. Quite recently, since this paper was written, Captain Hastings Berkeley made a similar suggestion, and put forward two axioms, which, however, seem to me more complicated than that of Playfair. (See my review of *Mysticism in Modern Mathematics*, *Journal of Philosophy*, 16th March, 1911.) It is not unlikely that other similar suggestions may have been made.

old. Moreover, I lay no stress whatever on the particular arrangement. As it stands, it is intended to introduce as few changes as possible on the old euclidean order and arrangement. There is an undoubted gap in Euclid's reasoning in that he introduces a complicated postulate, which is not only not *a priori*, but which is very difficult to understand and to explain. Many attempts have been made to surmount the difficulty, of which Playfair's axiom is the best known, and, in my opinion, the clearest. Objections have been made to every one, and many mathematicians still hold the opinion that a non-euclidean space is not only conceivable but actually possible. Holding as I do the opinion that curved space is a contradiction in terms, I have good reasons for putting forward another attempt to solve the difficulty. For Playfair's axiom is substituted the axiom of direction (Step 2). The exposition, as it stands, will suffice for the purposes of philosophy. Whether or no it contains anything likely to be of service to writers of text-books on geometry, must be left to those who deal with such problems to decide.

The difficulty in which both mathematicians and philosophers have been involved is that, to state the axiom of parallels in a simpler form than that of Playfair, a number of collateral changes are necessary. It is hoped that this paper will indicate a method by which such changes can be made.

It is interesting to note how those who deny the *a priori* nature of the axiom of parallels find themselves, by force of logical necessity, occupying a position which differs very slightly from that expressed in these pages. Prof. Poincaré is an excellent example of this tendency. He asserts clearly that, even if astronomical observations should appear to confirm the validity of other forms of geometry, we should not therefore assert the objective existence of other forms of space.[1] He is clear and definite on the point that, under no circumstances, should we give up euclidean geometry. Yet the difficulty of statement prevents him from asserting the principle to be *a priori*.

In submitting a solution for this particular problem, I am, of course, aware that others are raised. What *is* the meaning of the

[1] The point is of such interest that it will be well to quote one of the most relevant passages: "If Lobatschewsky's geometry is true, the parallax of a very distant star will be finite. If Riemann's be true, it will be negative. . . . But what we call a straight line in Astronomy is simply the path of a ray of light. If therefore we were to discover negative parallaxes, or to prove that all parallaxes were higher than a certain limit, . . . we could either give up euclidean geometry or modify the laws of optics and suppose that light is not rigorously propagated in a straight line. It is needless to say that every one will look upon this solution as the more advantageous. Euclidean geometry has therefore nothing to fear from fresh experiments" (*Science and Hypothesis*, English edition, p. 73).

It would certainly appear that concepts that have nothing to fear from fresh experiments are, if not *a priori*, at any rate remarkably like it.

various systems of metageometry? That they have methodological value is, of course, obvious. But what is their philosophical meaning? How is it possible that our *a priori* principles can be disjointed, and that systems of geometry can be built up on the denial of one of them? Can the same be done with other axioms? Could we, for example, build up an arithmetic in which twice two would differ from four by an infinitesimal amount? Is it possible thus to find a self-consistent arithmetic analogous to our space of constant curvature? Questions like this must be deferred till the preliminary one is settled, and must be decided by those whose knowledge of mathematics is greater than my own. I venture here merely to submit two positions: (*a*) that the axiom of parallels is *a priori*; (*b*) that its *a priori* nature is shown by the arrangement suggested in the present paper.

H. S. Shelton.

REALISM AND PRAGMATISM.

Dr. Schiller's recent criticism of my *Present Philosophical Tendencies*[1] does not, I think, throw much light on the merits of the questions discussed, nor is it probable that there will be any profit in replying to it. It does not meet with precision and nicety any of the specific points which I have raised, even when these points are argued with citations from the reviewer himself. But I confess to a feeling of discontent that will not permit me to pass the review by unnoticed.

I have attempted in my discussion of the pragmatist conception of truth[2] to show the importance of distinguishing between those values which ideas have as instruments of the theoretic interest, the values namely of perceptual verifiability and of consistency with accepted beliefs, and those values which ideas have through their service of other interests, such as politics, or through their subjective emotional effect upon the agent, as in the case of religious faith. I have suggested that if one groups all of these values loosely under the notion of utility, and defines truth in terms of comparative utility, one virtually defines as true an idea which may be contrary to perception, or inconsistent with accepted beliefs, provided only there is enough of sentimental satisfaction in it to compensate. If *all* the values which ideas may have are to count for truth and be simply summed and subtracted, then in any given case disproof by scientific or logical methods may be overbalanced by positive values of "subsequential utility" or tonic emotionality. On this precise point Dr. Schiller has nothing to say. He simply reiterates the "biological necessity" that all the idea = values shall determine the idea's "survival". This, so far as I know, has never been denied. The question is whether an idea that was contrary to sensible experience might not survive because its emotional value outweighed the dissatisfaction at its contrariety to sensible experience; and whether therefore such an idea might not be "true" on Dr. Schiller's theory.

Dr. Schiller accuses me of having attempted to "read a metaphysical meaning into a number of pragmatic pronouncements which are clearly methodological". But the texts from which I have cited in arguing that pragmatism of the Schiller type is subjectivistic bear such titles as *The Ethical Basis of Metaphysics*,

[1] Mind, No. 86. [2] *Present Philosophical Tendencies*, p. 203 ff.

Philosophy and the Scientific Investigation of a Future Life, and *The Making of Reality*. No pragmatist that I have ever read has confined either himself or his pragmatism to "methodological" considerations; and it is perfectly clear that Dr. Schiller himself does not mean to do so, for he proceeds at once to present a third alternative which may save him from the necessity of deciding between idealism and realism.[1]

This third possibility which I am accused of "ignoring" is "the correlation of a mind-with-objects and objects-for-a-mind". I have *not* ignored this possibility. I have recognised it as a very common formulation of idealism.[2] The reader will observe that in the above formula the only constant is mind, or a relationship distinguished by the fact that mind must always be one of its terms. But waiving this point, how is one to discover the *real importance of this "correlation" to whatever may take the place of object in it.* How is one to determine the real, as distinguished from the methodological place of mind in the world? This is a fairly important question and it is the question at issue between idealism and realism. I cannot believe that it is "merely academic" and must therefore crave Dr. Schiller's indulgence further.

Now as to "the Ego-centric Predicament". Dr. Schiller admits that I give "much prominence" to it. But he must have discovered that fact by consulting the Index or the Table of Contents.[3] For he has not in the least understood the point, and most of what he attributes to me is flatly contradicted by the text. He suggests that I infer realism from the Ego-centric Predicament, whereas I have invariably asserted that *nothing can be argued from it.* My central point is that it is a *predicament* and throws no light on any question. Hence I should object that Dr. Schiller must not argue from it in support of his own *tertium quid*, whereas he does so in this very context. Again, he says that the predicament "seems to exclude nothing but the right to assert unknowable realities"; and that "unfortunately these are precisely what Prof. Perry wishes to assert". Now this is odd—in view of my italicised assertion that "it would not be far from the truth to say that the cardinal principle of neo-realism is *the independence of the immanent*".[4] What I do desire to assert, is, of course, that what is

[1] Should Dr. Schiller propose that the term "pragmatism" be confined to whatever is merely "methodological," then it would be simply a question of inventing some new name for the metaphysical sequel. There is such a sequel in the case of every pragmatist with whose writings I am familiar.

[2] Cf. *Present Philosophical Tendencies*, pp. 133, 155-156, 315-316, etc.

[3] If Dr. Schiller has skipped a few chapters here I cannot blame him. The matter is tiresome enough.

[4] *Present Philosophical Tendencies*, p. 313. But perhaps Dr. Schiller is relying on the authority of Prof. Pratt's "very able critique". It is difficult to suppose that two such downright misstatements of a view

known is independent of that fact, or that the "correlation" is accidental so far as the thing that appears as object is concerned.

And I propose to assert this on the evidence that I can obtain concerning the nature of mind. Without the least assistance from Dr. Schiller, I have explicitly stated that to prove my realism "something more is wanted than a proof of the failure of idealism". I have contended that if we want information concerning the necessity of the correlation in question for the thing related as object, the sooner we fall to examining the nature of the relation and especially of its constant term "mind," the better. Idealist, realist, and Dr. Schiller are here all in the same boat. None can prove his thesis without appealing to the nature of mind. I have therefore set forth the nature of mind to the best of my ability. I wish that Dr. Schiller might be persuaded to follow suit, with a clear statement of what he means by "life-process" (p. 282), "for-a-mind," and "experienced" (p. 283). We might then hope for some light on the important question cited above.

All that is clear concerning Dr. Schiller's view is that "biological necessity" is evidently not an infallible guide here. For biology does not treat the correlation of mind and environment as symmetrical and universal. It treats environment (or natural substances and processes which when related to an organism are called its environment) as prior to and independent of mind. My own observation and reflexion lead me to believe that the assumption of biology is correct. Mind appears to me to be a mode of response to an independently existing environment. I do not beg the independence, as Dr. Schiller suggests. I am not like Dr. Schiller, arguing the matter abstractly and dialectically. I base my conclusion on the observation that when an animal organism reacts sentiently to natural bodies in its vicinity, the relation is not such as to prejudice the independence of the natural body. The latter cannot be said to owe its existence, or its distinguishing properties to this relation; but can be said to owe them to other relations, such as its relation to its physical causes.[1]

Finally Dr. Schiller takes exception to my interpretation of James. He sees no reason "to depart from the view that James's 'realism' is pragmatic and not metaphysical, and that my [Schiller's] 'psychologism' is 'critical' and not subjectivistic". I think I have made it perfectly clear in my book that I am using the term "realism" to mean the independence of things on the whole idea-experience complex into which they may enter as objects. I recognise the pragmatic realism which Schiller attributes

that is repeated *ad nauseam* in the text, should have arisen independently.

[1] The question of the nature of mind is an empirical question, to which I have devoted the longest chapter of my book (ch. xii.). What notion of consciousness does Dr. Schiller accept? Or is this, too, an academic question? "Independence" I have defined with some care in *The New Realism*, ch. ii.

to James, the view, namely, that immediate experience is independent of ideation; and characterise it as a "half-realism".[1] James is, of course, a realist in this limited sense. But he was also, in his later philosophy, a realist in the first and fundamental sense, and in this sense Dr. Schiller is not. The key to this realism is in the essay "Does Consciousness Exist?"[2] Consciousness (thought, perception and feeling alike) is a relation, the terms of which are identical with those of nature and certain non-temporal conceptual "realms,"[3] and are interchangeable between mind and mind. The relationships assumed by these terms or "materia prima," are not all "solidaries with one another," so that the relations of an element as term of nature may be independent of its relations as term of consciousness. Now this I hold to be both James and also realism in a "metaphysical" sense.

Dr. Schiller refers me to his review of James's *Meaning of Truth*, in MIND, No. 74. But his point there is simply that James allows his "excellent metaphysic," Radical Empiricism, "to ooze through into his epistemological discussions" (p. 262). My contention is simply that the "excellent metaphysic" in question is realistic, and this Dr. Schiller has not denied. This particular metaphysical question has to do with epistemology, that is with the place of knowledge and consciousness in the world at large, and I can see no objection to an epistemologist's having an answer to it. But that when I called James a realist and Schiller a subjectivist I meant to refer to their metaphysics, I expressly and clearly stated in the text.[4]

As for Dr. Schiller's 'psychologism' it may have had its moments of being merely 'critical'. But when to a psychologistic epistemology is added the assertions that 'ontology, the theory of Reality,' is 'conditioned by epistemology, the theory of our knowledge'; that 'the knowledge-process is the life-process'; that truth 'has the making of reality'; and that 'our ultimate metaphysic must be ethical,'[5] it does not seem wholly unreasonable to characterise the author as 'subjectivistic'.

Just two further points. Dr. Schiller objects that I fail "to bring out the intimate connexion between James's psychology and his philosophy" (p. 282); whereas as a matter of fact I interpret his whole philosophy in terms of his theory of mind. Dr. Schiller should have said that my interpretation of James's psychology did not agree with his own; and should have corrected

[1] *Present Philosophical Tendencies*, ch. xiii., § 5.
[2] *Essays in Radical Empiricism*, ch. i. and *passim*.
[3] *Some Problems of Philosophy*, p. 101.
[4] P. 215. That it is possible to isolate the pragmatist theory of truth from metaphysical theories I have taken pains to state. I have proposed to adopt such a view myself. *Cf. Present Philosophical Tendencies*, pp. 213, 325, 347.
[5] *Humanism*, pp. 11, note 9, 105; *Studies in Humanism*, p. 451: MIND, No. 86, p. 282.

me when I was at fault. He should not have suggested that I neglected a relationship on which I laid the greatest emphasis. Second, I have made the 'serious mistake' of attributing to James "'an existential sense-manifold' *a la* Hume-Kant-Russell". Does Dr. Schiller object to my phrase, or has he overlooked such passages as the following: "Experience is only a collective name for all these *sensible natures*" (space, intensity, flatness, brownness, etc.); "Reality consists of *existential particulars* as well as of essences and universals and class-names, and *of existential particulars one becomes aware only in the perceptual flux*"?[1]

I might add that Dr. Schiller's review of my book is entirely *ex parte*. Concerning the main purpose of the book, namely to summarise and criticise current tendencies as a whole, I cannot find that he has anything to say.

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[1] *Essays in Radical Empiricism*, p. 27; *Some Problems of Philosophy*, p. 78. (Italics mine.)

THE MEANING OF KANT'S COPERNICAN ANALOGY.

KANT'S comparison (*Kritik der reinen Vernunft*, 2nd edition, p. xvi. (original paging) and note to p. xxii.) of his new hypothesis to that of Copernicus has generally been misunderstood. The reader very naturally conceives the Copernican revolution in terms of its main ultimate consequence, the reduction of the earth from its proud position of central pre-eminence. But that does not bear the least analogy to the intended consequences of the Critical philosophy. The direct opposite is indeed true. Kant's hypothesis is inspired by the avowed purpose of neutralising the naturalistic implications of the Copernican astronomy. His aim is nothing less than the firm establishment of what may perhaps be described as a Ptolemaic anthropocentric metaphysic. Such naturalistic philosophy as that of Hume may be described as Copernican, but the Critical philosophy, as humanistic, has genuine kinship with the Greek standpoint.

Even some of Kant's best commentators have interpreted the analogy in the above manner. It is so interpreted by T. H. Green (*Prolegomena to Ethics*, bk. i., chap. i., § 11). Caird in his *Critical Philosophy of Kant* makes not the least mention of the analogy, probably for the reason that while reading it in the same fashion as Green, he recognised the inappropriateness of the comparison as thus taken. The analogy is stated in typically ambiguous fashion by Lange (*History of Materialism*, English trans., ii., pp. 156, 158, 237), and by Höffding (*Geschichte der neueren Philosophie* (1896), ii., p. 64). Prof. S. Alexander, while very forcibly insisting upon the Ptolemaic character of the Kantian philosophy, also indorses this interpretation, in the following terms: "It is very ironical that Kant himself signalised the revolution which he believed himself to be effecting as a Copernican revolution. But there is nothing Copernican in it except that he believed it to be a revolution. If every change is Copernican which reverses the order of the terms with which it deals, which declares A to depend on B when B had before been declared to depend on A, then Kant—who believed that he had reversed the order of dependence of mind and things—was right in saying that he effected a Copernican revolution. But he was not right in any other sense. For his revolution, so far as it was one, was accurately anti-Copernican" (*Hibbert Journal*, October, 1910, p. 49). As Kant's second edition preface is not covered by the published volumes of Vaihinger's commentary, the point has not been taken up by him.

Now Kant's own statements are entirely unambiguous and do not justify any such interpretation as that of Green and Alexander. As it seems to me, they have missed the real point of the analogy. The misunderstanding would never have been possible save for our neglect of the scientific classics. Kant had, apparently, first-hand acquaintance with Copernicus's *De Revolutionibus*, and the comparison which he draws assumes similar knowledge on the part of his readers. Copernicus by his proof of the "hypothesis" (his own term) of the earth's motion sought only to achieve a more harmonious ordering of the Ptolemaic universe. And as thus merely a simplification of the traditional cosmology, his treatise could fittingly be dedicated to the reigning Pope. The sun upon which our terrestrial life depends was still conceived as uniquely distinct from the fixed stars. Giordano Bruno was the first, a generation later, to realise the further and more revolutionary consequences to which the new teaching, consistently developed, must inevitably lead.

Copernicus's argument starts from the Aristotelian principle of relative motion. To quote Copernicus's exact words (*De Revol.*, i., v.): "All apprehended change of place is due to movement either of the observed object or of the observer, or to differences in movements that are occurring simultaneously in both. For if the observed object and the observer are moving in the same direction with equal velocity, no motion can be detected. Now it is from the earth that we visually apprehend the revolution of the heavens. If, then, any movement is ascribed to the earth, that motion will generate the appearance of itself in all things which are external to it, though as occurring in the opposite direction, as if everything were passing across the earth. This will be especially true of the daily revolution. For it seems to seize upon the whole world, and indeed upon everything that is around the earth though not upon the earth itself. . . . As the heavens, which contain and cover everything, are the common locus of all things, it is not at all evident why it should be to the containing rather than to the contained, to the located rather than to the locating, that a motion is to be ascribed." The apparently objective movements of the fixed stars and of the sun are mere appearances, due to the projection of our own motion into the heavens. "The first and highest of all the spheres is that of the fixed stars, self-containing and all-containing, and consequently immobile, in short the locus of the universe, by relation to which the motion and position of all the other heavenly bodies have to be reckoned" (*De Revol.*, i., x.).

Now it is this doctrine, and this doctrine alone, to which Kant is referring in the passages before us, namely Copernicus's hypothesis of a subjective explanation of apparently objective motions. And further, in thus comparing his Critical procedure to that of Copernicus, he is concerned more with the positive than with the negative consequences of their common hypothesis. For it is

chiefly from the point of view of the *constructive* parts of the *æsthetic*, *analytic*, and *dialectic*, that the comparison is formulated. By means of the Critical hypothesis, Kant professes on the one hand to account for our scientific knowledge, and on the other to safeguard our legitimate metaphysical aspirations. The spectator projects his own motion into the heavens; human reason legislates for the domain of natural science. The sphere of the fixed stars is proved to be motionless; things in themselves are freed from the limitations of space and time. "Copernicus dared, by an hypothesis, which, though contradicting the senses, was yet true to seek the observed movements, not in the heavenly bodies, but in the spectator" (Kant's note to p. xxii.).

Watson's *Philosophy of Kant Explained* (p. 37) is the only work in which I have found correct and unambiguous indication of the true interpretation of Kant's analogy.

NORMAN KEMP SMITH.

VI.—CRITICAL NOTICES.

Ethics. By G. E. Moore, Lecturer in Moral Science in the University of Cambridge. The Home University Library, Williams & Norgate. Pp. 256.

Only a few months ago Dr. Bosanquet reviewed in these columns Mr. Bertrand Russell's *The Problems of Philosophy.* And now Mr. Russell's philosophical ally has put forth in the very same series a volume of identical dimensions, dealing with fundamental problems in Ethics. Readers of *Principia Ethica* will find in Mr. Moore's latest work the same dialectical ability, the same engaging simplicity of language. Yet, perhaps they will be a little perplexed—and that, too, for more than one reason.

First of all, let us briefly consider the composition or structure of the book, as distinct from its ethical significance. And here we may devote a few words to what is presumably its object. It is, in its conception, I gather, a concise introduction to Ethics; it assumes on the part of the reader no acquaintance with the thinkers of eminence, the writers "of acknowledged reputation" (p. 253); it is in a certain sense "popular"; it is for that wide general public, who come uninstructed to the subject and would attain to some broad comprehension of the fundamental questions at issue. It may, therefore, be appropriate to inquire in what degree it fulfils this main object. As one who has had some experience of teaching, I have ventured before now to point out that the traditional methods of approaching philosophy are far too remote from the minds of the pupils. But, if this applies to the pass-man, it applies also to "the man of the world," who is busy, intelligent, untrained. We should begin, as Aristotle would say, with what is known to us, γνώριμον ἡμῖν. And so I could wish Mr. Moore had set out with "the conflict of duties," with some popular ideas of right conduct, with the current conflicting moral judgments—in a word, with some common experience, however unreflecting, isolated or crude. From that basis he might have advanced to *Principia Ethica* at the last. He would seem, on the contrary, concerned in the main with that small class of men, who are strictly termed moral philosophers, and their manifest conflicts of view. He appeals at the outset to "experts" (p. 9). Grant that the mental and the physical sciences in like manner are the work of the "experts". But will the audience, to whom (I conceive) Mr. Moore makes his primary appeal, see the intimate bearing of their theories, so

elaborate, comprehensive, ingenious, upon their daily and immediate experience? The two opening chapters of *Ethics* are devoted entirely to a theory, which "seems to him," Mr. Moore says, "what is *often* meant by the familiar name 'Utilitarianism'" (p. 77). He considers it "peculiarly simple and easy to understand" (p. 12). And "simple" it is—in some senses! It is capable of statement in quite simple language; it may run at times into commonplace judgments; the rudiments of it may be sought in the statement that "men desire pleasure". Yet the uninstructed reader, as I think, will have a great difficulty in detecting the fundamental questions at issue and bearing them clearly in his mind in virtue of so many, so subtle distinctions, so continuous a flow of dialectic. In a note upon books at the end Mr. Moore recommends among others Canon Rashdall's *Theory of Good and Evil*. Canon Rashdall comes nearer "common sense" in his method of approaching the problems, though beginning with Hedonist doctrines. May I venture in this connexion to suggest that MIND would be doing a great service to philosophy, did it open from time to time its columns to discussion of the problems of teaching? If philosophy is ever again to be a real power in the world, our thinkers must both teach and write not only with simplicity of language but also with a greater attention to the psychology, the difficulties, the circumstances and the daily experience of the audience.

I have one more observation to make upon the substance of *Ethics* as a whole, and it is complementary to those I have been urging. While beginning with a philosophical theory, which may or may not have been held in its totality by any one thinker (p. 77), Mr. Moore has admittedly written from the standpoint of one single school—let us call it the new Intuitionism. Hence the ordinary reader may suppose that this school holds the field at the moment —which I conceive not to be the case. how powerful so ever it may be in philosophical circles in Cambridge.

So much, then, on Mr. Moore's volume considered as a prelude to the study of Ethics. In its scope and its character it differs entirely from Prof. Sorley's *The Moral Life*. Neither, again, is it a history of Ethics.

And now something at least must be said of the main positive doctrines of *Ethics*. "For further explanation," observes Mr. Moore, "of the views advocated in the present work the reader may be referred to the author's *Principia Ethica* . . . which presents the same general view in a rather different form, and which also contains discussions on various points entirely omitted here from lack of space" (p. 254). The main omission would appear to be this—Mr. Moore tells us little or nothing of the logical or metaphysical background of his central doctrine of the notion of "good". The very word "notion" occurs, as I think, only once in the volume—and that, too, of "right," not of "good" (p. 146) If he know not already his *Principia*, will the reader understand

from this book that "good" is an objective quality of objects, as objective apparently as "yellow"? This omission appears to my mind in no small measure to detract from that lucidity (as distinct from simplicity of language), which Mr. Moore's philosophical followers will find so conspicuous in *Ethics*.

And now as to this doctrine of "good". To put it briefly, so Mr. Moore tells us, we judge of a number of things, that they are "good" or have "intrinsic value". We do not in making such judgments mean that they are "pleasant" or "desired" or that we have any mental attitude towards them, whether of feeling, desiring or thinking. We mean that it would be "worth while" that those particular things "should exist". "Good" (the word) is admittedly ambiguous, we may use it in more than one sense, on occasions we may possibly use it to mean merely that some one or other has some mental attitude or feeling towards the thing called by him "good" (p. 161). But Mr. Moore would concentrate our attention upon that single use of the term, to which I have just now referred. He argues that "to judge that a thing is intrinsically good is not the same thing as to judge that some man is pleased with it or desires it for its own sake" (p. 165). "This follows absolutely," he argues, "if even in a single case, a man believes that a thing *is* desired and yet does *not* believe that it is intrinsically good." But how does it follow absolutely? Meaning is ever individual, can only be determined by the speaker. But Mr. Moore gives us universal meanings. For as much as in some concrete cases the speaker does not *ex hypothesi* mean "desired" by "intrinsically good," therefore in no case whatever does "intrinsically good" mean "desired"! And I cannot myself follow that.[1] "But I am not sure," continues Mr. Moore, "that this argument will hold against all forms in which the view might be held. . . . It may, so far as I can see, be true that there really is some very special feeling of such a nature that any man who knows that he himself or anybody else really feels it towards any state of things cannot doubt that the state of things in question is intrinsically good. If this be so, then the last argument" [that some men "can and do judge that things which they themselves desire or are pleased with, are nevertheless intrinsically bad"] "will not not hold against the view that when we call a thing intrinsically good we may mean merely that *this special feeling* is felt towards it. And against any such view, if it were held, the only obvious argument I can find is that it is surely plain that, even if the special feeling in question had *not* been felt by any one towards the given state of things, yet the state of things *would* have been intrinsically good" (p. 166). This, I conceive, is no other than

[1] Suppose that in Mr. Moore's argument "right" and "conducive to the Good" were substituted for "intrinsically good" and "desired"—what then? Some old-fashioned Intuitionist (if any such still there be) might add to the gaiety of nations by parodying Mr. Moore's book.

the central passage of the book, and I would direct to it especial attention.

1. Let us suppose for a moment that some one of Mr. Moore's readers has borrowed his dialectical weapons. Might he not answer as follows?—"When I judge that the state of things in question is good or has intrinsic value, I mean merely that I feel thus towards it; and, did I not feel thus towards it, it would *not* have been intrinsically good. All that we need to show, is that we sometimes use 'good' in that manner. Hence 'intrinsically good' has two meanings. You refer to an objective quality and I to a subjective feeling. Is your science concerned with both senses? If not, why with one and one only?" Mr. Moore would, I think, be hard put to it to find a way out of the difficulties, that would immediately arise in this context.

2. And now, not to follow Mr. Moore in the paths of a subtle dialectic, I will go on very briefly to point out my main difficulties in regard to his doctrine. Consider this statement once again: "Even if the special feeling in question had *not* been felt by any one towards the given state of things, yet the state of things *would* have been intrinsically good". "*Would* have been intrinsically good"—this brings us to the doctrine of the notion. Objects are assumed to be "good" apart from all feelings or attitudes towards them.[1] "Intrinsic value" belongs to them *somehow*—is (so we read in *Principia Ethica*) a non-natural property or quality as yellow (for instance) is a natural. But *how* does this quality belong to them? What can be meant by "belong" in this context? I am simply at a loss to discover what is Mr. Moore's answer to these questions. This objective and non-natural property is the strangest noumenon of our time; and like some other more famous noumena it appears to be simply unknowable. "It will perhaps gravel even a philosopher to comprehend it," as Berkeley might say. What a gl‡bness and lightness of heart the philosophers betray, when they predicate qualities! How many, for instance, there are, who predicate "existence" of objects, but are totally unable to tell us what kind of existence they speak of!

3. Mr. Moore is no intuitionist in the commonplace sense of that term. Yet, if old-fashioned crude intuitionists say that "right" belongs somehow to actions as a simple, indefinable quality, what answer could Mr. Moore make? Would there not then be two simple notions, unrelated the one to the other? And what, then, becomes of our science? Yet he does but transfer the old cruces from the judgments that predicate "right," to the judgments that predicate "good". If we take up on behalf of the critics Mr. Moore's

[1] However, "it does seem as if nothing can be an intrinsic good unless it contains *both* some feeling and *also* some consciousness; and, as we have said before, it seems possible that amongst the feelings contained must always be some amount of pleasure" (p. 249). Intrinsic goods contain feeling, but we need have no feelings *towards* them.

special logical standpoint, some judgments are "true" and some "false"; yet judgments of intrinsic value are admittedly "incapable of proof". How, then, shall we come to a conclusion in the vast prodigality of judgments? First of all, we judge rightly or wrongly that certain objects have "intrinsic value"—we seem to ourselves to perceive that they possess this unique simple quality; and, secondly, we seem to perceive or we judge that our judgments are "true". We do but repeat the old chaos, the climax of old intuitionism.

4. What is meant by this "intrinsic value"? That 'tis "worth while" a thing "should exist"? *Obscurum per obscurius*, surely. What kind of existence is intended? And, secondly, how can we say it is worth while that a thing should exist without reference to some purpose or end? As I have ventured to put it elsewhere in an argument against Mr. Moore, "'Value' and 'worth,' being idols of the market, in this context are *Idola Fori*".[1]

These, then, are the pre-eminent difficulties, that I find in this doctrine of "good," viewed simply and solely in itself. Mr. Moore, as I have hinted already, would have made it far clearer to the reader, had he simply asserted at the outset that there is such an an objective quality, characteristic or property of things, that we use the word "good" to denote it (by "good" meaning "intrinsic value"), that ethics (as handled in his volume) has this property for its primary object.

The final feeling that I have of the book is summed up in that phrase of St. Ambrose: *Non in dialectica complacuit Deo salvum facere populum suum.*

HAROLD P. COOKE.

Die Realisierung: Ein Beitrag zur Grundlegung der Realwissenschaften. Von OSWALD KÜLPE, Professor an der Universität Bonn. Erster Band. Leipzig: Verlag von S. Hirzel, 1912. Pp. x, 257.

IN a paper that Prof. Külpe read at the last meeting of the International Congress of Philosophy, held at Bologna in 1911, he dealt briefly with some of the problems connected with the concept of Reality. These problems, we now learn, have occupied his thought for the past fourteen years, during eight of which he discussed them in his lectures at Würzburg. And the volume now under review constitutes the first substantial instalment of a work planned in four volumes in which Prof. Külpe proposes to present and explain fully the results of his prolonged reflexions on the numerous problems associated with the assertion and determination of Reality in all its forms. The satisfactory solution of these

[1] *Cambridge Magazine*, 30th Nov., 1912.

problems lies at the very basis of those sciences that purport to deal with real objects (*die Realwissenschaften*), as distinguished from those that (like mathematics, for instance) are mainly concerned with ideal objects, or those (if any) that purport to be occupied with what is purely phenomenal. And Prof. Külpe's aim is to vindicate the realism of the *Realwissenschaften* by means of an adequate Theory of Knowledge.

By *Realisierung*, or 'realisation,' Prof. Külpe does not mean what those terms usually denote, namely, the process of *making* something real; he means rather the process of *apprehending* in or through consciousness something that is or has been. The object so apprehended is called 'real,' and the process is one of 'realisation'. This process, moreover, is twofold, or has two aspects. First, there is the process of apprehending or asserting *that* something is, and in the second place there is the process of apprehending and asserting *what* it is. (Kant's postulation of an unknowable thing-in-itself is a typical instance of the former process by itself.) The problem of 'Realisation' may therefore be resolved into the following four distinct problems or questions, which may accordingly be regarded as formulating the general scheme of Prof. Külpe's whole inquiry: (1) First, is it legitimate to *assert* reality at all? (2) Secondly, if so, *how* is it possible to assert reality? In other words, on what grounds (empirical or rational) can such assertion be based? (3) Thirdly, is it possible to *determine* the character of the real? (4) Fourthly, if so, *how*, or on what grounds, is it possible to determine the character of the real?

Prof. Külpe rightly remarks that the natural sciences have hitherto always proceeded on the assumption of realism (that is to say, on the assumption that they were treating of real things transcending the subjective impressions or experiences of the investigator), and, considering their enormous achievements while working on this assumption, it will take a great deal to overthrow their realism. It will certainly require much more than the kind of abstract generalities with which Mach and others try to justify their anti-realist theories. Prof. Külpe's plan is to discuss in turn all the anti-realist arguments that have ever been propounded by responsible thinkers, and, after showing their inconclusiveness against the realist standpoint, to proceed positively and constructively to an exposition of his own philosophy of critical realism. As regards the present volume, the early portions are devoted to preliminary explanations, while the bulk of the book is taken up with an exhaustive discussion of the first of the four questions formulated above.

Is it legitimate to assert reality of any objects of human experience? Is it permissible to recognise a special class of 'real' things? These paraphrases of Prof. Külpe's first question may be necessary because its purport may be easily misconstrued. By something 'real' he means something transcending the subjective experience

in which or through which it is apprehended or asserted. This subjective experience as such has *Wirklichkeit*, or 'actuality' (in the literal sense), but not 'reality,' except perhaps in so far as it may be made the objective reference of *another* assertion, in which case the 'reality' of the former assertion would 'transcend' the latter assertion regarded merely as a subjective process. Moreover, the bare 'transcendence' of subjective experience does not yet constitute 'reality,' for 'ideal objects' mere constructions of human thought (like mathematical concepts, for example) have such 'transcendence' or objectivity without having reality. Unless all this is borne in mind Prof. Külpe's question may easily appear very unreal. For, it may be urged, who has ever doubted that there are realities? Even sceptics, as St. Augustine and Descartes have made abundantly clear, could never have doubted the reality of their own sceptical states of consciousness. But granting, as of course Prof. Külpe grants, the actuality of all conscious processes as such, there still remains the further question whether or no such actual states of consciousness are also a means of apprehending realities that transcend them. And it is to such 'transcendent' reality that the above question refers. Unsophisticated commonsense and natural science implicitly answer this question in the affirmative. But numerous philosophers, and even certain scientists with a philosophical turn of mind, have given a negative answer—though none ever supposed the world to be a b ank nothing, if one may say so. Prof. Külpe's first question might perhaps with advantage have been formulated somewhat differently, but his meaning is sufficiently clear, and his question, properly understood, is perfectly relevant.

Prima facie it might be supposed that its fruitful use in everyday life and in science constitutes sufficient evidence of the validity of the distinction between real objects, on the one hand, and ideal objects and mere subjective experiences, on the other. Since, however, objections have been raised against it, one's natural confidence in its validity can only be deliberately retained by rejecting the arguments against it. On the other hand, apart from the confutation of such opposing arguments, no additional positive evidence is really necessary in justification of the validity of the distinction in general, as distinguished from its application to particular cases. Prof. Külpe, accordingly, considers that he will have sufficiently established his view of the general validity of the process of 'realisation' if he should succeed in refuting all the anti-realist arguments that have ever been put forward.

Now those who decline to recognise 'real' objects as a special class of entities must resort to one or other of the only two rival theories, namely, *Konszientialismus* and Objective Idealism. The first of these rival views regards all things as states of consciousness, whether of an individual consciousness (subjective idealism, or Solipsism), or of consciousness in general (the theory of immanence).

Objective Idealism, on the other hand, distinguishes the process of consciousness from its objects, but treats all objects as ideal constructions. Both theories, however, are opposed to the recognition of a class of real objects that need be neither mere states of consciousness nor yet mere thought-constructions. Prof. Külpe arranges all the anti-realist arguments under one or other of these two principal headings, and ingeniously pits some of the arguments of one of the two anti-realist theories against those of the other, so as to faciliate the mutual annihilation of both foes of Realism. Needless to say Prof. Külpe's treatment of the subject is characterised by great erudition and critical acumen. I must content myself, however, with the briefest indication of the main drift of the book.

Konszientialismus, Prof. Külpe thinks, has rendered a service in drawing attention to the fact that conscious experience is the starting-point of all scientific knowledge, but has fallen into the exaggeration of supposing consciousness to be everything. It has overlooked the fact that in experience itself there is implicit a reference to objects transcending it. Moreover, if we were strictly confined to mere processes of consciousness no science would be possible, not even the science of Psychology, the great stronghold of this theory. For even Psychology has to resort to 'transcendent' objects, in the form of unconscious factors, etc., in order to explain the real continuity and connectedness of mental life in spite of the apparent interruption and disconnectedness of conscious processes. And if even Psychology cannot do without 'transcendent' realities, how much less can the natural sciences dispense with them! Similarly, Objective Idealism has the merit of having emphasised the importance of thought for knowledge, but has erred into an exaggeration of the place and function of thought in the general scheme of things. No knowledge, no science would be possible without thought. But though some sciences, such as mathematics, for example, deal mainly with the creations of pure thought, still none is entirely the creation of thought, all sciences depending more or less on experience and observation for their starting-point. This is eminently the case with the empirical sciences. The fact that objective idealism commonly seeks support in ethical or religious postulates is regarded by Prof. Külpe as a betrayal of its diffidence in its properly scientific foundations. Critical Realism, he maintains, combines the partial truths of both its rival theories, while avoiding the errors of either. It emphasises the importance of experience as the starting-point of all knowledge without falling into the error of making it also the end of all knowledge; and it stresses the factor of intellectual construction in the work of discovery, without identifying the realities discovered and construed by thought with thought itself or thought-constructions. It is, moreover, the only view that does not invalidate the work of the sciences.

It will be observed that Prof. Külpe's criticisms assume the validity of the sciences. This may look like a *petitio principii*.

For it might be urged that the validity of the sciences depends on on the validity of the processes of 'realisation'; hence to base the validity of 'realisation' on the assumed validity of the sciences is to beg the question. Prof. Külpe's procedure, however, appears to be quite valid. The anti-realist arguments which he is concerned to refute are all, or nearly all, based on the ground that 'realisation' involves assumptions which are inconsistent with the methods and ideals of science. Now Prof. Külpe rightly maintains that the methods and ideals of science are best studied by observing the actual methods and aims pursued in actual scientific investigation; and any theory that would render the sciences themselves invalid has no claim to be called scientific, or to speak with the authority of science.

A realist reviewer is not likely to find much cause for complaint in Prof. Külpe's searching criticisms of anti-realist standpoints. At the same time it should be noted that he has not yet explained the precise character of his realist philosophy. 'Realism' may cover a multitude of things, as is evident from the fact that Prof. Külpe brings together under that designation the views of Bradley, Ladd, and the signatories to the American "Program and First Platform of Six Realists". Even the term 'Critical Realism' is not much more elucidating, since it only excludes naïve realism. However, the volume before us contains some indications that Prof. Külpe's Critical Realism will probably not be on the lines of the 'New Realism' expounded by English writers in recent years. Indeed, Prof. Külpe does not appear to be acquainted with the English movement; though it is possible that he is reserving his views of English Realism for later on when he comes to consider the last two questions on his programme. In any case, we are looking forward with great interest to the appearance of the remaining volumes of *Die Realisierung*, the first instalment of which is certainly full of good things.

A. Wolf.

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Pragmatism. By D. L. Murray. With a preface by Dr. F. C. S. Schiller. London: Constable & Co., 1912. Pp. x, 77 (in the series of "Philosophies Ancient and Modern"). Price 1s. net.

The key-note of this lucid, enlightening and admirably written little book is that it undertakes to show, as Dr. Schiller rightly remarks in his preface, the *intellectual necessity* of Pragmatism—*i.e.*, the theoretical and practical impossibility of maintaining a divorce between theory and practice. "Mr. Murray," says Dr. Schiller, "is quite right in emphasising, above all, the services of Pragmatism as a rigorously critical theory of knowledge, and in refuting the amiable delusion of many pedants that Pragmatism

is merely an emotional revolt against the rigors of Logic. It is essentially a reform of Logic, which protests against a Logic that has become so formal as to abstract from meaning altogether." Certainly no better guide than this could be placed in the hands of any one who desires a preliminary orientation in the subject. Even the merest philosophic tyro can derive from it a clear insight into the vastness and importance of the new issues that Pragmatism has raised. And it may be recommended with particular heartiness to those critics of Pragmatism who apparently find it difficult to realise that any philosopher should have the hardihood seriously to challenge intellectualist applications of such petrified and sanctified antitheses as those between logic and psychology, 'objective' and 'subjective,' thought and action.

Pragmatism, or Humanism, as Mr. Murray shows in his first chapter, is a stream of many sources, whereof the most important is without doubt the "new psychology" of William James (chaps. ii. iii.). Here Mr. Murray takes as his effective starting-point James's destructive criticism of that Humian atomism which the Kantian 'answer' to Hume so blindly accepted. (Perhaps not sufficient prominence is given to James's keen realisation of thought as a *moving* continuum: a conception which Bergson has since turned to such fruitful account.) "Psychology . . . had worked itself to a break-down by accepting the 'sensationalistic' analysis offered by Hume, and dragged philosophy with it. Yet the escape was as easy as the egg of Columbus to the insight of a genius. William James had merely to invert the problem. Instead of assuming with Hume that . . . all connexions were illusory and all experience must ultimately consist of psychical atoms, James had merely to maintain that this separation was secondary and artificial, and that experience was initially a continuum" (p. 17). "All Hume's problems, therefore, are unreal, and those of his apriorist critics are doubly removed from reality. The whole conception of philosophy as aiming at uniting disjointed data in a higher synthesis runs counter to the real movement, which aims at the analysis of a given whole" (p. 19). From this it now seems an easy step to the principles of Selection (pp. 20-21) and Postulation (pp. 21-33), wherein the indiscerptible unity of theory and practice is brought vividly before our eyes.

By a process comparable to that of ontogenetic recapitulation in the realm of biology, Pragmatism manifestly reproduces in its own genesis the features which it recognises as characteristic of thought in general. For its vital and unifying principle is the determination to "bring Philosophy into relation to real Life and Action" (p. 70). Its superiority "lies in this, that it does not discourage human enterprise by assuming that the real is completely rigid and eternally achieved without regard to human effort. In the drama that unrolls reality, every man, it teaches, has a duty and a power to play his humble but essential part" (p. 76). Consistently with

his final summary of the grounds on which pragmatism challenges comparison with the achievements of Intellectualism, Mr. Murray shows us Pragmatism developing into an articulate system, not as a necessity of 'pure thought' prior to and independent of experience, but as a working policy, responsive to experience of the deceits of dogmatism and absolutism. Pragmatism, in fact, regarded as a philosophic product, is an effort to deal with the situation created by the "bankruptcy of Intellectualism," (chap. vii.). The pragmatist is the man who refuses to throw up his hands and cry *Tout est perdu*, when Intellectualism finally reveals itself in its true character and levels the pistol of universal Scepticism at his head. Instead, he begins by recognising that the obvious impossibility of adjusting our thought to the exacting and peculiar standard of the Absolute—an impossibility aggravated, though it cannot be enhanced, by the fact, so far as under these circumstances anything can be a fact, that in the Absolute thought itself no longer exists "as such"—in no wise relieves *us* from the *practical necessity* of thinking as truly as we can about what more immediately concerns us. That is the origin of the pragmatist re-examination of the notion of 'truth'. For the professional philosopher is, after all, the only man who can earn, or rather make, a living by proving 'knowledge' to be impossible. And even for him this means of livelihood is seriously threatened by the advent of the pragmatist, poisoning the public ear with his low gibes at 'useless knowledge'. But men in the mass must act and *must work;* and if Ideal Truth is unwilling to share this humble lot with them, they must e'en cast about for some less dignified helpmeet.

Pragmatists, therefore, proceed to investigate the nature and standards of *that kind of thinking* to which value is attached alike in the markets, the battle-field and the laboratory. They thereby find themselves in occupation of what is philosophically a virgin territory, the resources of which they have as yet only begun to exploit. It is the land where dwell all such hitherto unconsidered trifles as time, personality, value, purpose, action—which Intellectualism has had to rule out in its self-defeating effort to grasp the Whole.

"No doubt it seemed to simplify the problem to suppose that the functioning of the intellect could be studied as a thing apart, and unrelated to the general context of the vital functions. Again it was to simplify to assume that thought could be considered apart from the personality of the human thinker. But it should not have been forgotten that it is possible to pay too dearly for simplifications and abstractions, and that they all involve a risk, which the event may show should never have been taken. So it is in this case. Its rash assumptions confront Intellectualism with a host of problems it cannot attack" (p. 67). Thus Pragmatism, which begins by entrenching itself in the territory of Practice, beyond the range of a consistent Intellectualism, if indeed there

were such a thing, ends by dominating the realm of theory and destroying the very idea of its independence and purity.

Mr. Murray has a shrewd reply to the alleged 'subjectivity' of the pragmatic method, which is not, I think, to be found in any other pragmatist: "It should be clear, though it is often misunderstood, that there is nothing arbitrary or 'subjective' in this method of testing beliefs. It does not mean that we are free to assert the truth of every idea which seems to us pretty or pleasant. The very term 'useful' was chosen by pragmatists as a protest against the common philosophic licence of alleging 'truths' which could never be applied or tested, and were supposed to be none the worse for being 'useless'. It is clear both that such truths must be a monopoly of Intellectualism, and also that they do allow every man to believe whatever he wishes, provided only that he boldly claims 'self-evidence' for his idiosyncrasy. In this purely subjective sense, into which Intellectualism is driven, it is, however, clear that there can be no useless ideas. For any idea any one decided to adopt, because it pleased or amused him, would be *ipso facto* true. Pragmatism, therefore, by refuting 'useless' knowledge, shows that it does *not* admit such merely subjective 'uses'. It insists that ideas must be more objectively useful—*viz.*, by showing ability to cope with the situation they were devised to meet. If they fail to harmonise with the situation they are untrue, however attractive they may be. For ideas do not function in a void; they have to work in a world of fact, and to adapt themselves to all facts, though they may succeed in transforming them in the end" (pp. 50-51).

In conclusion, we may draw particular attention to the very clear presentment, in chapter vi., of the criticisms urged by Mr. Alfred Sidgwick and Dr. Schiller against the fundamental conceptions of Formal Logic.

HOWARD V. KNOX.

William James and Other Essays on the Philosophy of Life. By JOSIAH ROYCE, LL.D., Litt.D. New York: The Macmillan Company, 1911. Pp. xi, 301. Price 6s. 6d.

William James. Par EMILE BOUTROUX, membre de l'institut. Paris: Librairie Armand Colin, 1911. Pp. 143. Price 3 fr.

William James. By EMILE BOUTROUX. Translated by Archibald and Barbara Henderson. London: Longman, Green, & Co., 1912. Pp. vii, 126. Price 3s. 6d.

AMONG the many books and articles commemorating the life and work of William James, which appeared soon after his death in August, 1910, the essay which opens Prof. Royce's book strikes a distinctive note by its unusual standpoint. Whereas most other writers have spoken of James as a Psychologist and a Pragmatist,

and have dwelt *e.g.* on his protests against 'Associationism' in the study of mental processes, and against 'Intellectualism' in the theory of knowledge, Prof Royce dwells rather on the religious and ethical side of James's teaching. He ranks James as the third great typically American philosopher alongside of Jonathan Edwards and Ralph Waldo Emerson. Like these, James stands for and voices the ideas and ideals characteristic of a distinct phase of American national life. From this point of view the emphasis falls not so much on the *Principles of Psychology* or on *Pragmatism*, but on the *Varieties of Religious Experience*, on the *Will to Believe*, on the *Pluralistic Universe*. To us, in Europe, this is a less familiar side of James, notwithstanding what we all owe to the three books just mentioned. But it was, no doubt, a side very much more obvious to all who as pupils, colleagues, friends lived in daily contact with James and came directly under the influence of his rich and varied personality. It is interesting to learn that *Varieties* not merely ushered in a new era in religious psychology by teaching the psychologists 'a new tolerance in their study of religion' (p. 21) and a more just appreciation of the genuineness of the individual's religious experience, but that it has actually quickened and invigorated religious life itself. 'The new gospel, the glad tidings of the subconscious, began to be preached in many lands' (pp. 21-22). Prof. Royce makes it clear that he is unable to agree with a great deal in James's view of religion, but he puts it on record that *Varieties* 'is full of the spirit, that in our country, has long been effective in the formation of new religious sects' (pp. 23-24). And his final verdict is 'I am sure that only an American thinker could have written this survey, with all its unconventional ardor of appreciation, with all its democratic catholicity of sympathy, with all its freedom both from ecclesiastical formality and from barren free-thinking' (pp. 25-26).

In the sphere of Ethics Prof. Royce claims that the two ideals of 'efficiency' and of 'playing the game' represent the modern American's dominant attitude towards life. In the pursuit of these ideals there is much unrest, impatience, wilful caprice, but none the less 'they characterise a people that is indeed earnestly determined to find itself, but that so far has not found itself' (p. 30). These ideals James deepened, purified and even, in a measure, 'transcended'. If he did propose to measure the truth of ideas by their 'consequences,' and to test them by their 'working' in 'experience,' yet he not only took experience in the deepest and most comprehensive sense, but he insisted in the *Will to Believe* above all on the necessity of high ideals and the faith which 'plays the game' by living up to them strenuously and imposing them upon the world. Though he spoke, in his picturesque language, of the 'cash-value' of ideas, the temper of his mind was essentially unworldly and spiritual. He was a kind of 'American Carlyle' (p. 39), 'a prophet of the nation that is to be' (p. 45). In

drawing attention to this side of James's character and teaching—a side that is apt to be forgotten in the heat of controversy about Pragmatism—Prof. Royce has done a signal service to his memory.

The other essays in this volume require no detailed review here, for they mostly deal with topics like loyalty, the vital elements in Christianity, and immortality, on which Prof. Royce has written fully in his bigger works. One essay on 'the problem of truth in the light of recent discussion' was read at the International Congress of philosophy at Heidelberg in 1908.

M. Boutroux's book is delightful reading. It is written with all the charm and elegance of style of which M. Boutroux is a master, and the most convinced disciple of James could not have set forth his theories more appreciatively or persuasively. There is no hint of criticism in these pages. There is only a faithful and vivid presentment of James's whole philosophy, leaving the reader to judge for himself its total achievement and value. After an introductory chapter on James's life and personality, the ground of his philosophy is traversed in chapters dealing with Psychology, Psychology of Religion, Pragmatism, Metaphysical Views, and Pædagogy. The characteristically American trait in James's thought is, according to M. Boutroux, the refusal to be an 'esclave du donné,' the determination to master and mould the world by action. No doubt, this was one of the motives for the pragmatic theory of truth, for 'real possibilities,' and for the protest against a 'block-universe'. Like Prof. Royce, M. Boutroux lays the greatest stress on the religious and ethical teaching of James, and it is an interesting suggestion that James's use of the phenomena of Psychical Research as a clue to the 'psychical basis' of religion may be traced back to the abiding impression of Swedenborg's theories which he received in his youth from his father. Following up this suggestion, one is tempted to say that the two poles of James's 'Radical Empiricism' were Pragmatism on the one side and a certain Mysticism on the other. The former of these had its roots partly in James's training in scientific method with its 'verification' of hypotheses by their 'working,' partly in his moral enthusiasm for re-moulding the world nearer to the heart's desire (the Will to Believe). His Mysticism had its root in his religion and in his interest in all human experiences of the supernatural. This, it seems to me, also explains, what James himself always admitted, *viz.*, that many of his metaphysical theories are no necessary result of his Pragmatic method. This amounts, in effect, to a confession that these theories are not held wholly or solely because they are verified by their 'consequences' In fact, there is not much attempt to exhibit the verifying consequences of several of the theories which James, as metaphysician, adopted *e.g.* in the *Pluralistic Universe.* His Pluralism, his conceptions of a universe still in the making, and of a finite God, may be held to show us James the Pragmatist, at least on that side of Pragmatism which

would vindicate a place for the effectiveness of human action in the 'making of reality'. But we have James the Mystic in some of the 'over-beliefs' of the last chapter of *Varieties*, in the welcome he extended to Fechner's conception of a World-Soul, and in the view which M. Boutroux summarises as 'la philosophie est plutôt affaire de vision passionnée que de logique'. Not that Pragmatism and Mysticism are necessarily exclusive, even though the dominant attitude of the former is action, and of the latter contemplation, but they are at least sufficiently different to make their synthesis in one world-view a matter of personal temperament rather than of inherent logic. The visionary, though no doubt he will live by his visions and be inspired by them in conduct, yet will hardly wait for their consequences to establish their truth. For James, the connexion was probably mediated by the extraordinary range of his sympathy with every form of experience, by the 'live' interest which he took in every effort of the human mind to feel its way to a deeper truth. But it suggests curious reflexions about the meeting of extremes in philosophy when we find M. Boutroux summarising James's metaphysics thus: 'L'idée essentielle de la metaphysique de James est l'identification de la réalité avec l'expérience la plus large, la plus complète, la plus profonde et la plus directe, à savoir avec la vie la plus intime de la conscience' (p. 135). That view of reality might be supported by the least repentant of Absolutists and Idealists!

The translation of M. Boutroux's book is only of average merit. In style, its worst fault is that it always reads like a translation, the phrasing and the construction of the sentences being full of echoes of the French. Nor is it free from occasional blunders. The worst instance I have come across is to be found on pp. 20-21 where 'A vrai dire, nous ne savons pas précisement si le plus humble réflexe . . . n'est pas, au fond, *irréductible* au pur mécanisme' is translated: 'Truth to tell, we do not actually know whether the slightest reflex . . . is not actually, at bottom, *reducible* to pure mechanism' (italics mine), which is exactly the opposite of M. Boutroux's argument. And this misunderstanding of the argument is continued into the translation of the next sentence: 'Et, quand l'explication qui suffit au physiologiste coinciderait exactement avec la réalité, pourquoi tous les réflexes, sans exception, se ramènerent-ils a ces réflexes élémentaires?' which is rendered: 'And when the explanation which satisfies the physiologist *coincides* exactly with reality, why should *not* all the reflexes, without exception, be referred back to these elementary reflexes?' This sacrifices the force of the subjunctive 'coinciderait' and introduces a 'not' which spoils the sense, the argument of the whole passage being that there is no justification for assimilating all reflexes to the elementary type even if there be cases—which we do not know for certain—for which the purely mechanistic explanation of the physiologist suffices.

R. F. Alfred Hoernlé.

Les Étapes de la Philosophie mathématique. By LÉON BRUNSCHVICG. Paris: Librairie, Félix Alcan, 1912. Pp. xi, 591. 10 francs.

IN his preface, M. Brunschvicg remarks that, twenty-five years ago, it seemed that, in order to give a philosophical account of modern mathematics, all we had to do was to appeal to the clear and distinct notion of whole number. However, at the beginning of the twentieth century, "a revolution was announced by the entry upon the scene of symbolic logic. The Aristotelian conception of a class (or of a propositional function) became the keystone of a building whose vast proportions contrasted with the cramped building of arithmeticism, and which seemed to derive its solidity from the elements of discourse in general. But, under the pressure of the contradiction which there was in realising the universe of discourse, the class of all classes, the building collapsed. Mathematical logic (*logistique*), which subsisted without any doubt as a technical discipline, confessed itself powerless to justify mathematics as mistress of the truth. Then, by an inevitable reaction, mathematical philosophy was left to intuition. . . . In this state of things, there only seems to me to be one thing left to do: instead of plunging into the whirlpool formed by so many contrary currents, to consider this whirlpool in itself, and to investigate the conditions of its formation and development. The basis of philosophical criticism would then be in the history of mathematical thought" (pp. v-vi).

Two things are to be noticed about this extract. In the first place, the summary of the recent history of mathematical logic is very inaccurate: this will occupy us later. In the second place, it is not clear why M. Brunschvicg should think that a study of what people have thought should give us any information about the truth of these thoughts. It is doubtfully possible that we may be able to make plausible guesses about the future direction of thought from a knowledge of the current in the past, just as the rough and ready knowledge of hydrodynamics possessed by the average person enables him to make guesses about the as yet unseen currents of a whirlpool. We may remark, by the way, that the analogy of the movement of thought with the movement of molecules is often very misleading, Still, the decision as to whether or no we have knowledge of the truth about certain propositions—and surely this is M. Brunschvicg's object—is ultimately a matter depending on each of us. We may be helped by knowing and thinking through what others have thought, but this is a psychological question. History may help us—and, I think, *does* help us—on the way to the truth in mathematics or philosophy by suggestion or opportunity for criticism: it *is* not the truth we seek in that place, nor can it possibly be a basis for criticism in any but a psychological sense. Logically speaking, history is irrelevant; psychologically speaking, as a stimulus to new discovery and criticism, history is as indis-

pensable as acquaintance with other people. To say that the only thing to be done in a certain logical difficulty is to consider history is like saying that the only thing to be done when we have failed in solving a difficult mathematical problem is to take a cup of tea. Plausible reasons both for and against the good influence of history and the tea on our work can be given, and neither history nor tea is, logically speaking, at all relevant to mathematics.

M. Brunschvicg's former works on Spinoza and Pascal led him to concern himself with the aspect of history as the basis of philosophical criticism: the positions which these two thinkers took with respect to Cartesian geometry seemed to him to dominate in part their conceptions of human reason and of its exegesis. The domain of these studies is to be extended in this volume (p. vi). "Whenever," says M. Brunschvicg (pp. viii-ix), "one of the great disciplines of mathematics—arithmetic, geometry, infinitesimal analysis—has become conscious of itself, a system in which a universal conception of things was based on this discipline grew up. This was the case with Pythagoreanism, Spinozism, and Leibnizianism. For causes which the passing of time allows us to see at the present day, not one of them succeeded in fixing the mobile equilibrium of thought. *A fortiori*, the attempts of arithmeticism or mathematical logic to bind mathematics to a form which should express a permanent necessity, an eternal truth, were doomed to destruction. History gives an account of the path of thought that brought philosophers to the ontology of Pythagoras or of Aristotle; but it also explains, by making us see the evolution of doctrines which had their starting-point in the arithmetistic or logistic interpretation of mathematics, why these doctrines were incapable of answering to the dogmatic intention of their founders." M. Brunschvicg thus proposes to explain the controversies in modern mathematical philosophy by the historical method. We must not, then, expect a solution of, or proof of the insolubility of, certain difficulties, but just a use of the researches of learned people to describe the surroundings in which these difficulties grew up, and a tracing of the analogy of the new with the old. I cannot think that the great erudition which M. Brunschvicg has used has been great enough for either purpose, and I will try to justify this statement. Still, there are many true and suggestive things in this volume. Thus, it seems indubitably true that advances in the philosophy of mathematics have always been preceded by technical advances in mathematics, so that it is quite consistent with M. Brunschvicg's plan to study first the stages (*étapes*) of the history of mathematics.

The history of mathematical philosophy begins with the doctrines of Pythagoras and his school, and M. Brunschvicg has to determine the technical progress to which the philosophy corresponds (p. 3). The historical method requires us to begin with the dawn of scientific thought. Now on this subject history is

almost silent, and we only find sufficiently precise indications in some Egyptian documents of great antiquity, of which the Rhind papyrus is the most important. "The only thing that we can do is to turn the difficulty, and substitute for investigations on the primitive era of our civilisations, observations which have been made directly on savage people in our times" (p. 4). Thus the first chapter of the first book is on ethnography and the first numerical operation; and M. Brunschvicg finds the characteristics of mathematical thought—of the way mathematicians think, not, in the usual and wrong sense, of the subject matter of mathematics—in germ here (pp. 21, 22, 23). Then M. Brunschvicg proceeds to discuss a problem of Ahmes from the Rhind papyrus. It seems extraordinary that, when dealing with this papyrus, M. Brunschvicg should entirely neglect that point about it which seems of the greatest interest: I mean the beginnings of algebra in what is known as the "heap" calculus. This is the first instance known of the use of the variable in mathematics, which we now know to be of such fundamental importance. It is recognised, both by more intelligent philosophers and mathematicians, that the notion of the variable and of propositional functions dealing with *any* one of a set of objects are of fundamental importance in mathematics. At a later stage of development the fact that mathematics uses knowledge other than that of a finite number of particulars—that it uses *a priori* and universal knowledge—played a most important part in philosophy and makes up the main point of difference between the *Nouveaux Essais* of Leibniz and the *Essay* of Locke. This is likewise not referred to by M. Brunschvicg.

After a chapter on Pythagorean arithmeticism, M. Brunschvicg proceeds to his second book, on the mathematism of Plato and his school. Like Pythagoreanism, Platonism is a philosophy of a mathematical type: Pythagoreanism—the identification of number with magnitude—had been compromised, as Zeno pointed out by his puzzles (pp. 48, 153-156, 348), by the Pythagorean discovery of irrationals (pp. 45-46), and in Plato's doctrine of geometrical mathematism irrationals played a large part (p. 48). The next two chapters of this second book are devoted to the origins of formal logic and Euclidean geometry. The notion of *class* was suggested to Aristotle by the first attempts at biological classification and by the decomposition of grammatical forms into their elements, and led to the constitution of logical ontology (pp. 341, 390). With the two last chapters of the second book we come to much more modern times and are given an account of the origin of analytical geometry with Fermat and Descartes. With Descartes there were philosophical ideas, whereas with Fermat we merely have to do with technical ideas. The account of the sources of Fermat's *Isagoge* seems very good, and also the distinction that M. Brunschvicg draws between Descartes' conceptions in the *Regulæ* of 1628 and the *Géométrie* of 1637 appears both new and important.

The *Regulæ* stand nearer to the work of Descartes in general philosophy, that is to say, the extension of the mathematical method to all cosmological problems—a reform of physics by mathematics which borrows nothing from the technique of the new geometry, while the *Géométrie* contains a reform of mathematics itself, consisting in the reduction of problems of geometry to the problems of algebra. "Space plays very different parts in the physics and in the geometry of Descartes. In the physics, the reduction of quality to quantity consists in retaining only the measurable aspects of sensible phenomena by the help of the dimensions of space. In the geometry, on the other hand, the spatial figures appear as a kind of qualities which are reduced to the purely abstract and intellectual forms of quantity—the degrees of the equation" (p. 107). In the *Regulæ*, there appears a characteristic of Descartes: his almost disdainful opinion of investigations in abstract mathematics; and in the technical *Géométrie*, composed owing to external pressure, Descartes seems to have returned to a stage of his thought which he believed that he had passed once for all (p. 115). One might have expected the work of Millet to have been mentioned at this place, but that is not done by M. Brunschvicg. Millet maintained that the invention of co-ordinate geometry was subsequent to that of the universal mathematics. That appears to be quite possible, and the invention of co-ordinate geometry, involving as it does the invention of a most beautiful mental picture of the mathematical idea of a function, that is to say, in the simplest case, a single constant relation which holds between any one of a set of numbers forming the range of "the independent variable"—pictured, in co-ordinate geometry, by the set of infinite points on a straight line—and a set of corresponding numbers—pictured by the set of points on a curve referred to the above axis. This picture seems to derive its beauty from the visualisation that it gives of the ability of mathematics to deal simultaneously with an infinity of data. Here we see most clearly the fundamental importance to mathematical philosophy of the notion of *any*.

With Malebranche, the Cartesian geometry became the reduction of geometry to algebra, and not merely the application of algebra to geometry (p. 132). Malebranchism and Spinozism were two divergent interpretations of Cartesian geometry (p. 198).

Leibnizianism proceeded from the infinitesimal analysis and marks a new stage in mathematical philosophy (p. 98). The relation of Newton to Leibniz is, in at least one respect, like that of Fermat to Descartes: Newton had merely technical ends in view, whereas Leibniz's discovery proceeded from a philosophical conception and became the basis of a general system (pp. 197-198, 226). The book—the third—on the infinitesimal analysis seems on the whole good. However, one would have expected in an erudite historical treatise such as would appear to be, in part, the aim of this volume some use to have been made of the published

investigations into the early manuscripts of Newton and Leibniz which relate to their great mathematical discovery. M. Brunschvicg mentions them either hardly or not at all. The omission, as far as concerns Newton, is excusable if he follows Moritz Cantor's exposition: it is not so as far as concerns Leibniz. As regards the later fortunes of investigations into the principles of the calculus, it is good to find that M. Brunschvicg follows the mathematicians rather than the philosophers, and is consequently just to Bishop Berkeley's ingenious polemic (pp. 194-196, 248). As for Leibniz's philosophy, M Brunschvicg does not quite agree with Messrs. Russell and Couturat that it is wholly logical in type (pp. 199, 204).

We now come to the second part of the volume, which deals with modern times. Here, probably owing to the lack of knowledge of good historical summaries of modern works, M. Brunschvicg's erudition retreats from him still more. I will give a few examples. On page 247, Cauchy's critical remark on Lagrange's use of series without an investigation into their convergence is quoted from a work edited by Moigno in 1868 instead of being quoted, as it ought to be, from Cauchy's *Résumé* of 1823. The part on continuity with Cauchy and others (pp. 330-340) is so utterly superficial as to be valueless to anybody trying to form a view of this part of the history of analysis. M. Brunschvicg's idea (pp. 354-368) that the "arithmetisation of mathematics" leads of necessity to nominalism seems based solely on the consideration of the work of Charles Méray, who happens to have been both an arithmetist and a nominalist, and the ignoring of the work of Weierstrass, Georg Cantor, and Dedekind, who were arithmetists without being nominalists. When sketching the history of symbolic logic, the work on the logic of relations of Lambert and De Morgan is neglected, there is no mention of the important differences between the Boole of 1847 and the Boole of 1854, and the account of Frege and Peano is very inadequate. M. Brunschvicg's wish (p. 383) to show that the notion of transfinite ordinal numbers is not merely a dialectical construction but has its roots in the technique of analysis is surely a very praiseworthy wish, and one that would appeal strongly to those who have to teach something about these numbers to pupils. But the way he fulfils this wish is singularly unfortunate. He ignores completely Georg Cantor's work on "derivatives" of point-aggregates, which actually gave rise to the thought of these numbers, and is still by far the most "convincing" way of introducing the subject, and gives, as an example, an infinitary scale constructed by Borel on the basis of some indications due to Paul du Bois-Reymond. This example is confusing, above all to one who makes acquaintance with the transfinite numbers for the first time, for the simple reason that the thing which corresponds to the index ω is not determinate, as it is in the case of the "derivatives" On page 394, great stress is laid on the "resist-

ance" of Henri Poincaré, and the fact that, as M. Couturat pointed out, this "resistance" was due to an *ignoratio elenchi* is ignored. On page 398, it is said that the first discovery of logistics was that the principle of identity, on which all logic used to be based, is only one among the logical principles, and perhaps the least useful of all. This is the merest superficiality: this "discovery" was made certainly by Hegel and probably by others before him. The uselessness of tautology does not require symbolism to make it evident. M. Brunschvicg has the confusing habit of quoting the titles of the French translations of certain works with the date of publication of the English or German original. This increases the labour of any one, who, with a just suspicion of M. Brunschvicg's accuracy, tries to verify references. Such labour is also increased by such a reference as that on page 393: "*Mind*, p. 523 *et suiv*". I will leave for a short time the easy task of pointing out M. Brunschvicg's sins of commission and omission, and will try to give an account of the view taken in the second part.

The logic of Euclid and Archimedes, in which spatial intuition was utilised for the constitution of the initial definitions and for the putting into shape of the axioms and postulates, survived the attempts to build up a logic of mathematical analysis which should be independent of spatial intuition, to which the discovery of the infinitesimal calculus gave rise. With Kant, space remains the necessary mediator for the connexion between the abstract relations which constitute science and the empirical facts which constitute reality (p. 341). Fichte, and perhaps all the post-Kantians, failed to keep their doctrine of mathematics in close contact with the course of living science, and, from the author's point of view, the heir of Kant's thought is neither Fichte nor Hegel nor Schopenhauer, but Auguste Comte (pp. 282-283). The mathematician Fourier, on account of both his close friendship with Comte and his great advance in mathematical physics, exercised, in company with Lagrange, a preponderating influence on Comte's thought. Fourier was of the opinion that mathematics was merely a tool for the physicist, and Comte followed him (p. 296). Fourier's great researches were on the theory of the conduction of heat, and Comte's physics was divided into mechanics and "thermology".

Soon after the first volume of Comte's *Cours de Philosophie positive* was published, there came a transformation of the scientific bases. Cauchy transformed pure mathematics—we have, above all, his new theory of the "continuity" of functions—Lobachevski transformed classical geometry, and Sadi Carnot—so says M. Brunschvicg somewhat inaccurately—began the transformation of general mechanics (p. 304); and we accordingly have two chapters on non-Euclidean geometries and on mathematical analysis and continuity.

The fifth book is on the evolution of arithmeticism, which M. Brunschvicg thinks—on insufficient grounds, as I have shown

above—necessarily resulted in nominalism. The sixth book is on "the logistical movement". "Arithmeticism must be considered as a movement which . . . appears to be ordered by the nature of the human mind, since it is the same movement which we have seen go from Pythagoreanism to Aristotelianism. But the formal logic of Aristotle is the prototype of the contemporary logistics: at the contact of modern methods and by imitating the perfected algorithm of mathematics, logistics has shown a suppleness of analysis and a care of rigour from which the Aristotelian logic was very far removed. Logistics is certainly a new technical discipline; the philosophy of mathematics that certain thinkers (Mr. Bertrand Russell in the front rank of them) think they can deduce from it is certainly, in spite of its fidelity to the ontologism of Aristotle and Scholasticism, a new event" (p. 369; *cf.* p. 342). This candid admission that Mr. Russell is not entirely mediæval must be most gratifying to him: at least it is an admission that some of his German mathematical critics have not yet made. But why should Mr. Russell be considered to be a neo-Aristotelian or scholastic? M. Brunschvicg makes this clear.

It is hardly an exaggeration to say that on almost every page in the sixth book there is at least one futility. Perhaps the greatest is the attribution to Mr. Russell of a sort of neo-Aristotelianism, of a belief in the "substantiality" (p. 390) of the class. M. Brunschvicg often mentions (pp. 399, 401, 423, 424) the *Principia Mathematica* of 1910; and yet he does not seem to have grasped the fact that all Mr. Russell's work since about 1905 has proceeded without the assumption that there are any such things as classes at all, and that a great part of the first volume of the *Principia* is devoted to a systematic exposition of the theory of incomplete symbols, which is the basis of all Mr. Russell's modern work on the principles of mathematics. But this is not the worst. M. Brunschvicg attributes (p. 407) the "final shipwreck" of mathematical logic to the contradiction of which a form was discovered by Mr. Russell. We know that at one time there seemed, to one eminent German, a prospect of a shipwreck, not only to mathematical logic, but to all mathematics. We know now that this danger has passed. But M. Brunschvicg believes that this fictitious shipwreck was caused by a difficulty which, since he twice translates "it is" by "il y a" (p. 407), is nonsense. In view of this, it is doubly surprising that M. Brunschvicg should twit the realists with credulity, and point out (p. 410) that their difficulties with the man who says "I lie" arise from that politeness which is based on credulity.

Briefly speaking, the critical part of this book may be described, it seems to me, as follows. With the purpose of throwing light on a problem which he misconceives, M. Brunschvicg employs inaccurately an irrelevant method. The case is analogous to that of the kind old foreign gentleman who thought that some mechanics

would be helped in the making of new locomotives if a Life of James Watt was read aloud to them. So he did so, though unfortunately there were many words he mispronounced and many sentences he did not understand. M. Brunschvicg's learning, besides being irrelevant to his present purpose, does not seem to be either useful or harmless for other purposes. Learning, we know, is harmless in the learned, and most useful where it is least found—in teachers and learners. Most teachers, in fact, are disinclined to learn, and most learners suffer under the disadvantage of being taught by teachers.

The seventh and last book contains M. Brunschvicg's own conception of intelligence, which is suggested by the actual development of mathematics. Arithmeticians and cultivators of mathematical logic have tried to surround the system of modern mathematics by a net-work of *a priori* forms, and their attempts resulted, on the one hand, in nominalism, and, on the other, in empiricism (p. 427). The intuitionist movement has determined a new "*étape*" in the evolution of mathematical philosophy, which is consecutive to the "ruin of the purely formal conceptions which proceeded from *arithmeticism* or *logistics*" (p. 460). But the philosophy which corresponds to this new stage can only succeed in taking a coherent and positive form if it goes beyond the notion of intuition. For this purpose, M. Brunschvicg makes use of his twofold experience of the history of philosophy and of that of science (p. 460). After discussing the roots of arithmetical, geometrical, and algebraical truth, M. Brunschvicg concludes with a chapter on the reaction against mathematism. One would think that, owing to the valuable critical work of M. Couturat on the objections raised against "logistics" by such intuitionists as Poincaré, the irrelevance of the intuition to questions of mathematical logic had become a commonplace in France. Such, unfortunately, does not seem yet to be the case, and it is therefore a reviewer's duty, when writing a notice of a volume which, by its appearance of thoroughness and careful discussion, makes a serious bid for consideration, again to point out this irrelevance.

PHILIP E. B. JOURDAIN.

Eternal Life: a Study of its Implications and Applications. Baron F. VON HÜGEL. Edinburgh: T. & T. Clark, 1912. Pp. l, 443.

BARON VON HÜGEL'S volume is sure of a warm welcome from its readers both because of its value as a study in the philosophy of Religion and for its merits as a genuinely devotional work of the best kind. It is, of course, only in the former capacity that it can be dealt with in the pages of this journal. As a study in religious

Philosophy it has the first-rate importance of being written not, as so many contributions to *Religionsphilosophie* seem to be, from without but from within. Its affinities are not with monographs on the mental life of bees or ants, but with the classics of self-examination and introspection. What is put before us for our study is not something which it may suit the possibly personally irreligious but conscientiously system-making philosopher to call "religion" for the purposes of his scheme of things, but the implications of religious life as actually led by a faithful member of a great communion, and at once sustained and controlled by the culture and tradition of a church deeply rooted on the abiding needs of humanity as they are witnessed to by history. It is this independence of "private judgment," in the bad sense of the term, which before everything else strikes me as giving Baron von Hügel's book its singular value. One is sure that in studying religion, with him for a guide, one is dealing not with what one individual with the peculiarities of individual temperament has found an adequate faith, but with something which has proved sufficient for the needs of countless myriads of all shades of intellectual and moral difference. Further, it is noteworthy that the book has throughout the note of universality or catholicism in a still deeper sense. Its author stands at the farthest possible remove from the temper of those who can be satisfied with a division of the faiths of mankind into one which is *true*, their own, and a multitude which are false. Writing with full conviction that his own confession presents a richer and fuller type of spiritual life than others, he is constantly on the search for the element of truth, the apprehension of a universal verity, in all the beliefs by which men have found it possible to face life and death. From the philosophical side, we might say, the task he has set before him is to look for the witness of all the religions and all the philosophies to fundamental verities which find their completed expression in action in the provision made by historical Christianity, and more especially by the great Roman communion, for fostering and advancing the development of spirituality in persons. Thus his treatment of philosophical thought and religious life outside his own communion is permeated by that spirit of true charity which is the very antithesis of the shallow indifferentism which only too often claims the name. (I would refer, in particular, for illustration to the unqualified recognition of the true spirit of personal piety in the judgments passed on Spinoza and Schleiermacher, and to the sane and generous appreciation of the aspiration after a faith which lies beneath the violence and crudities of Nietzsche.) I would also congratulate the author on the skill with which he has steered clear of the rock of over-simplification. It is with a true insight that he insists that just because the function of religion is what Prof. Bosanquet has called soul-moulding, the spiritual life is necessarily for man one of tension between antitheses, neither of

which can be simply ignored. Thus he rightly insists against over-strained Idealism in philosophical theory and one-sided Puritanism in religious practice, that a durable religion cannot afford to concentrate itself on the soul to the neglect of the body, or on the individual to the neglect of the community, and infers rightly, as I think, the necessity of an Institutional factor of culture and symbolism for a complete religion. Yet he does not make the mistake, so common in our own days, of supposing that the spiritual life can be resolved wholly into one of social community and social service. It must find its expression in these activities, yet it draws the extraordinary energy which it infuses into work for communal betterment from its moments of utter and complete "inwardness" and detachment from every "creature". It is the necessity of combining the burning sense of social duty with such a temper of detachment which makes it so hard "to be a Christian," and yet that the thing can be done is proved sufficiently in practice by the exceptionally strenuous social activity of such great mystics as St. John of the Cross and the two Catharines. The same sense for wholeness shows itself in the exceedingly interesting chapter (ch. xii.) in which Baron von Hügel discusses the five great problems, each depending on an unavoidable antithesis between equally justified tendencies, which are just now particularly agitating his own communion, the conflict between the demand for the freedom of philosophising and the tendency of the authorities to give the sanction of the Church exclusively to the scholastic fusion of Aristotle with Proclus, the conflict between the claims of historical criticism and the necessity of a permanent nucleus of historical data for the Faith of the Church, the antithesis between the need for unity and the duty of toleration, the conflict between the claims of canon law and the rights of the sovereign state, and the more general conflict between the claim of religion to concern herself with politics, no less than with other affairs of life, and the deep-rooted modern hostility to the interference of the "priest" in "secular affairs". Baron von Hügel naturally deals with all these difficulties in the acute forms in which they exhibit themselves in the attitude of the Vatican towards "liberal Catholicism" and towards the "lay state". But, in one form or another, every one of the problems exists, or show signs of appearing, in all the more considerable Christian communions. Thus in the Anglican Church we have already our own "modernist" difficulties, the trouble about the respective claims of "Church's Law" and the "law of the land" is already on us in connexion with such questions as those of divorce and "forbidden degrees," and all forms of Christianity have the persistent hatred of the "priest in politics" always with them. Yet only the relatively few who can be content to be either "whole-hog" secularists or unqualified sacerdotalists can make an easy way out of any of these difficulties by simply suppressing one side of the antithesis, and thus the author's treatment

of these problems has a real interest for a much wider community than his own Church.

The general position of the author may be briefly summarised as follows. In the life of the lowest animals we have a kind of experience which perhaps rises little above the category of monotonous uniform "succession" or "clock-time". In the higher animals and specially in man this monotony is, if ever, only reached in the least significant of all vital phases, deep sleep, dull reverie in which there is no continuous and progressive development of subjective interest or attention. The character of characteristically wide awake human life is that which Bergson describes as *durée réelle*, succession which appears to vary in rapidity and concentration with the various vital activities and interests. But, besides merely successive and merely durational experience, religion and philosophy in all ages have conceived a kind of life which they attribute in the fullest sense only to God or the gods, an experience which is *totum simul*. The great aim of religious and practical philosophies is to teach us so to reorganise our personality that, through an immediate contact with this strictly eternal life of God, we may in our turn develop in ourselves a derivative "eternal" life, which, however, precisely because we are and must always remain creatures, has to display itself within the form of "duration". Thus the main point is that the distinction between "eternal" and "temporal" life is not identical with that between the "present life" and "the life to come". The distinction is between two contrasting polarities which exhibit themselves in the actual present life of the religious man, a life that, in fact, derives its peculiar character precisely from this tension between "worldliness" and "other-worldliness" or rather "unworldliness". Immortality—the doctrine that for the creature man the durational aspect of life persists as essential after the death of his present organism—is a secondary consequence based on a right understanding of the way in which the "eternal," for a creature, implies the "durational" as its necessary complement. The primary matter is the quality of such derivative eternity, its *quantity* is secondary. In the course of the work most of the great philosophical and religious constructions of the Western world come in for penetrating, though always sympathetic criticism. I would commend in particular the insight shown in the criticism of Spinoza, and the powerful handling of Kant's theology, in which, as Baron von Hügel well shows, religion almost ceases to be genuinely religious precisely because Kant insists on finding its sources wholly in ethics, to the neglect of ontology and cosmology, just as many other eighteenth-century writers attenuate it equally by looking to "nature," exclusive of the social life of man as the one source of revelation of the divine. The criticism of some of Bergson's curious paralogisms is also excellent, though I could wish it had been a little more detailed. Baron von Hügel rightly

sees that there are false positions taken up in the *Données Immédiates de la Conscience* which lead to fundamental misconceptions from which Bergson never really gets away in his later volumes. In fact he finds in him much the same fault which Socrates found in Anaxagoras. In his *durée réelle* he has elaborated more fully than any of his predecessors the very conception required to provide the true "form" of derivative eternity, but somehow seems to have no adequate sense of its applications. I think further inquiry would reveal that the source of most of the defects noted by the author lies in one or two very simple fallacies about measurement which are enunciated with utter *naïveté* in the very first chapter of the *Données*. Thus it seems to be assumed there (1) that nothing can be quantitative *unless* you can construct a scale of measurement for it; (this has a great deal to do with the allegation that psychical facts cannot be quantitative); (2) that because there are qualitative differences between the various portions of *durée réelle*, there are *only* qualitative differences between them; (3) that, even in spatial measurement, there is only one kind of measurable magnitude, *viz.*, the length of a straight line. Every one of these assumptions, which would be highly important if true, seems to me false. As to (1) it is by no means clear that wherever a "more" and a "less" of something can be found, measurement is possible. For measurement implies the possibility of introducing standards and units, and it is not obvious that these can be found throughout the whole range of the more and the less. Thus intensities of pleasures and pains, of emotional stress and the like are clearly magnitudes, since you can commonly say of two pleasures, or two pains, which is the more intense, of two moods of emotional stress which is the most violent, but there seems to be no means of devising unit intensities. Hence we must not hold that psychic facts are purely "non-quantitative" because most of them cannot really be measured. As to (2) there is no reason in the world why quantitative and qualitative differences may not coexist between the same terms. Such a contrast as that drawn by Mill between a "little of" a "higher" pleasure and a greater amount of a "lower" is an elementary example in point. It would be psychologically false to deny that there is a real meaning in saying that I may get an intenser pleasure from eating a lump of sugar than I do from listening to a political address. And as to (3) Bergson seems to forget that in geometry we measure not only straight lines, areas and volumes of rectilinear figures, but also, *e.g.* angles, and that angular measurement at least is not reducible to any combinations of measurements of straight lines. Hence his theory that "real duration" is in its own nature non-quantitative, together with all the consequences which rest upon the theory, appears never to have been properly established. If I might suggest a criticism it would be that Plato perhaps, alone among the great philosophers, gets rather less than his due. The precise

distinction which Baron von Hügel wants between the simultaneity of God's experience and the derivative "eternity" exhibited in combination with duration which belongs to "creatures" might have been found in the *Timaeus* where the "created gods" and "souls" are twice declared to be "immortal" not in their own right, but in virtue of the will of their Maker, and time, as Aristotle notes, is made to be the characteristic form of the life of the "soul of the world" as eternity is that of the life of the Creator. Nor should Plato be accused, as he is on page 37, of "distressing insensibility to the odiousness of certain Pagan vices". Baron von Hügel has surely forgotten the language of disgust with which these aberrations are referred to in the *Phædrus*, language so plain as to be hardly bearable to a modern ear, and the enforcement of the strictest Christian ideal of purity in the *Laws*. φιλοσοφία, to its credit, set its face against these things from the first, though it would have been a dereliction of duty in the Hellenic world to bury them in silence. Indeed, it is not so clear that our habit of pretending that the same things are non-existent among ourselves is altogether a gain to morality. Against such little occasional asperities, however, let me hasten to set such a remark as the following about Darwin, which much more truly exhibits the large charity of the writer: "Darwin's rapt interest in the interrelated lives of plants and insects, in a bird's colouring and a worm's instincts, are, in their grandly self-oblivious out-going to the humble and the little, most genuine flowerings of the delicate Christian spirit in this fierce, rough world of ours. Without such real love, bridging over such real differences between realities possessed of varyingly deep inner lives, such studies instantly become impossible, or dry and merely ingenious, or weakly sentimental." (p. 281.)

A. E. Taylor.

VII.—NEW BOOKS.

A First Book in Metaphysics. By WALTER T. MARVIN. Published by The Macmillan Company. Pp. xiv, 271.

THE present work is meant as a text-book for students, and contains copious lists of authors for concurrent reading. It is written in a simple and rather conversational style, not without Americanisms. The writer's views are those of the Six Realists of whom he is one. The two other general influences are James as to the nature of consciousness, and Bergson as to evolution.

Philosophy deals with indefinable notions and indemonstrable propositions on the one hand, and seeks for the highest possible generalisations on the other. Metaphysic is that part of philosophy that deals with the real as distinct from the ideal. This would cut out Metaphysic of Ethics altogether, and consistently the author does not touch it. But it would also seem to cut out Logic which he does treat.

In the third chapter the nature of what is known is discussed. What we know is always a relation between two or more entities. To direct awareness of terms he denies the name knowledge. I do not think the author makes himself clear on the distinction between 'acquaintance with' and 'knowledge about,' though he uses the terms. Since what we know when we have knowledge about anything (in which case alone does he use the word knowledge) is a proposition, and since he also says that it is a relation between terms, he is forced to call a great many things propositions to which no one could normally give that name. Thus the universe is defined as 'the true and complete explanation of all facts,' which makes the universe consist of a collection of propositions, whilst what it actually is is the entities and relations which these propositions are about. In fact when we know that xRy what we know is neither merely R nor the related complex (with both of which we can of course be *acquainted*), but *that* R relates x and y in this complex. The author says that anything exists if it is a part of the universe; but how can the parts of an explanatory theory exist? They can of course be propositions that assert existence; but this is a very different matter.

Some truths are perceptible. These are called facts apparently when the terms are particulars which are themselves perceived; if the terms are universals the truths are *a priori* propositions. Perception in this wide sense is the ultimate test of truth, and coherence is only an application of one important perceived truth—the Law of Contradiction. What I should prefer to say is that direct acquaintance with certain complexes gives rise to judgments of self-evident propositions about the relation of their terms. The author dismisses and rejects the rival theory that all analysis involves falsification and that coherence is the sole test of truth.

In the discussions which occur in various parts of the book on the subject of the reality of perceived objects (notably in chaps. iv. and xvi.) not enough answer is made to the difficulties of naïve realism. The

author always thinks that there is no alternative between the objects of perception being physical and their being mental. He has no difficulty in showing that there is not the smallest reason to think that they are mental in the sense in which the perceptions of them are mental, and therefore concludes that they are physical. But there are at least plausible grounds for thinking that they cannot be physical in the sense of being existentially and qualitatively independent of their percipients. His only attempt to meet the difficulties that suggest such an intermediate order of existents is to say that there is nothing impossible in the same thing having one set of qualities in one relation (*e.g.*, when seen), and another in other relations. But the real trouble is that it may stand in two sets of relation at the same time (*e g.*, to sight and touch), and then have incompatible qualities ; as when the top of a cup seen as an ellipse is felt as a circle.

Nominalism and realism with regard to universals are discussed in chapter x. and the latter is accepted. I have some difficulty in following the author's use of the terms subsistence and existence. He makes true propositions and relating relations exist; and the latter at any rate is in accordance with ordinary speech. Apparently he holds that false propositions subsist; but he naturally does not enter this maze in an elementary book. But I understand that he would make the relations and propositions of non-Euclidian geometry existent ; and here he seems to depart a good deal from ordinary usage.

In the chapter on Causation the statement that causation is reducible to implication and the placing of causal laws on a level with laws of what is eternal, as those of mathematics, seem to me liable to mislead students into thinking that ordinary causal laws have the logical necessity of those of pure mathematics.

The twelfth chapter on Evolution shows the influence of Bergson, though it compares favourably with that confused writer. Our author says that it seems probable (though it is not logically necessary) that there are existential propositions referring to later moments of time which cannot be inferred from any selection of propositions referring to earlier ones. Whilst this may very well be true the further statement that the future differs esssentially from the present and past, and not merely *quoad nos*, seems to me quite groundless. In the first place there are probably plenty of causal series which have come to an end, and so there are existential propositions about earlier moments that cannot be inferred from any selection of propositions referring to later moments. Secondly, I do not see why the past has a better status than the future ; no doubt some of the past *has been* perceived, but then it is equally true that some of the future *will be* perceived. And it seems to be purely a matter of our subjective limitations that some of the past *is now* perceived, and that none of the future is ; even if the latter be true—which I should hesitate to assert.

Theism and Theology as a Metaphysic are discussed in chapter xiv. and its appendix. It is a pity that Dr. McTaggart's most excellent book, *Some Dogmas of Religion*, is not recommended for further study of the hypothesis of a finite God. Dr. Howison's essay might also have been mentioned.

In chapter xv. the Substance Hypothesis is discussed. It is referred to the subject-predicate theory of propositions, and this is of course rejected. I doubt whether the subject-predicate theory was often so silly as to hold that 'propositions are made up of two terms and no relation,' as we are told on page 172. Substance, however, is mainly rejected on the ground that it explains nothing ; but one wonders whether it was ever meant to explain anything. The general theory of terms and rela-

tions explains nothing in particular; and in one sense at least of substance terms are substances.

Chapter xvii. contains a severe criticism of Epistemology regarded as the basis of metaphysic. But its claims are put much too high; I do not think it ever hoped to do more than to give limits to science and speculation; though perhaps parts of Kant's *Metaphysical Bases of Natural Science* might be quoted against me.

The last part of the book is devoted to the philosophy of Logic, Mathematics, Physics, Biology, and Psychology. It contains some errors. On page 223 the two entirely different forms of the syllogism in Barbara are by implication confused. Again it is said that the special sciences use logical principles as premises just as chemistry might use physical principles as premises. This shows that the author has not grasped the important distinction between the use of a logical axiom as a premise and its use as a principle of reasoning. I do not suppose that the syllogism is ever used as a premise in any science but logic and pure mathematics; though it is used as a principle in all sciences.

In Psychology the author takes up James's view about Consciousness developed in the essay, 'Does Consciousness Exist?' This extremely paradoxical theory is not rendered less so by anything in this book, and it seems unwise to state it dogmatically to beginners. There are some very odd arguments in favour of the view that it is necessary for Psychology that our mental states should not be private to ourselves. If they were, we are told, it would be useless to write books on psychology. But it would only be useless if we had *nothing* in common; if we have enough in common to make recognisable descriptions it is no more objection to psychology that we can *each* only perceive *some* mental states than it is to physics that we can *none* of us perceive *any* atoms. The author asserts in a note that the assumed privacy of mental life rests on the belief that we can know nothing but our own sensations. I should have thought that it rested on the tolerably obvious fact that we are not acquainted with those of any one else.

I have harped rather on points of difference, because in the main I am in agreement with the writer; and I think that the book, supplemented by reading and lectures, would be a valuable introduction to Metaphysics for students.

C. D. Broad.

Psychology: the Study of Behaviour. By William McDougall, M.B., F.R.S. Home University Library of Modern Knowledge. London: Williams & Norgate, 1912.

The importance of this little book is out of all proportion to its size. Written by one of our leading psychologists, and moreover by one whose original contributions to the science have been both numerous and varied, and of very great theoretical importance, the volume aims at setting out the exact position of psychology among closely cognate mental and physical sciences, and stating in broad outline the various fields of study which it covers. The author's standpoint is an original one. Defining psychology as "the positive science of the behaviour of living things," he admits that its province is coextensive with the province of physiology. He would differentiate the two sciences as at present studied by saying that "physiology investigates the processes of the parts or organs of which any organism is composed, while psychology investigates the activities of the organism as a whole, that is, those in which it operates as a whole or unit". The specific characteristic of "behaviour"

which makes it the appropriate subject-matter of a special science is "the dominance of the mechanical factors by purposive guidance towards a specific end or goal".

Dr. McDougall thus refuses to start with the conception of consciousness or mind in his analysis, but after first obtaining a firm objective basis for his science in the externally observable facts of behaviour, turns to introspection as merely a method of supplementing the knowledge obtainable from that source. Doubtless he would be willing to admit—indeed this seems to be his real view—that it it is only through a study of consciousness that we acquire any thoroughgoing knowledge of behaviour in its essence and in its implications. He differs from his predecessors in the order in which he arranges his psychological data. It is not the historical order, since, apart from Aristotle, to whom he refers, psychologists have in the past looked upon the individual consciousness as the one justification for the existence of their science and its ultimate subject-matter, but it is the one justified by logic and the only one which holds out any hope of further progress of the science in relative independence of metaphysics.

Perhaps the most interesting chapter of the book, from the standpoint of general theory, is that on "The Structure of the Mind," in which an important distinction is drawn between mental faculties and mental dispositions. A faculty is here defined as "an ultimate, irreducible, or unanalysable mode of thinking of, or of being conscious of, objects," and under this heading are classed "striving," in its two ultimate forms of appetition and aversion, "feeling" or "affection," including pleasure, displeasure, excitement and depression, as well as the primary emotions, and "knowing," which comprises the ultimate faculties of awareness, affirming and denying, and comparing. Extension and duration are both classed as attributes of objects, and not regarded as implying the existence of special faculties of the mind. As distinct from these potentialities of thinking in general, the potentiality of thinking of a specific object is called by Dr. McDougall a mental disposition, and he shows in a very lucid way how these dispositions grow in number and become organised by processes of progressive discrimination and perception of similarity to produce the body of knowledge possessed by an individual mind. He contrasts with these apperceptive processes which bring about a functional relation between dispositions corresponding to the logical relations between objects the processes of association which relate the dispositions in ways corresponding to the historical sequence of events, always under the guiding influence of some conative tendency. Of the relations between cognition and conation he writes: "These relations seem to be in the main of the nature of associative links, a complex system of cross-connexions between the dispositions of the two kinds," and in another passage: "Knowing is but the servant of feeling and acting; it is the process by which the will works towards its end and the satisfaction which comes with the attainment of the end". This view reminds one of Hume's dictum that "Reason is the slave of the passions," and rouses a similar antagonism. Thought enters too intimately into the development of will and of the higher feelings to make such a theory entirely convincing.

Other important chapters are those on Animal Behaviour, Childhood, Abnormal Psychology, and Social Psychology. Particularly interesting s Dr. McDougall's account of the views of Janet, Freud, and others on t e nature of hysteria and other forms of mental abnormality, and I cannot refrain from one last quotation in which he comments on the relation between the conscious and the subconscious. "We must recognize," he writes, "that the relations of subconscious operations to conscious think-

ing are in many cases so intimate, so much of the nature of participation in the working out of a single purpose, that any such division of the mind into two unlike parts, such as is commonly implied by names of the kind mentioned above, appears wholly unwarranted." This is a reminder that many theorists on the subject would do well to heed.

W. Brown.

The Metaphysics of Historical Knowledge. By Dewitt H. Parker. University of California Publications in Philosophy. Berkeley. Pp. 83.

The past does not exist, but can be known as having existed. And *qua* known, it possesses being, though not existence—being like that of eternal truths, for example. It is known by representative knowledge, in which immediate experience directs thought to the object; acts, that is, as an "objectifying idea". But there is a difference of kind between memory, which is more presentative, and report, which is more representative.[1]

The author holds himself bound to defend in some degree the representative theory of knowledge, as I think, unnecessarily, for he does not really employ it, though he sometimes insists on the contrast of "presentative" and "representative" in a way which I do not understand.

Change and becoming are ultimate categories, against which no criticism holds. Time is a series, but, in deference to Bergson, not a "punctual" series. We observe it in the content of facts, not merely in the transitions of consciousness. We are aware of loss and disintegration. The remark on optimism in this place I thoroughly assent to. Still, I suggest, gain is also possible, and loss brings a kind of completeness. "If I go not away ——." Time is coextensive with experience, which again is co-extensive with existence. "Even if the universe were to fall asleep and then waken, there would be no lapse of time [*i.e.* no gap in time, a strange usage], for there is no time where there is no existence," *i.e.* the ends of the conscious periods would join. It is interesting that the author should assume that there can be no existence while the universe is asleep.

Times in fiction cannot be used to show the possibility of more than one time, for only real time counts, and it is confined to existence. This seems to me to admit what it denies.

Existence of the past, we saw, is what the author selects for denial—persistent spatio-temporal existence. He states the doctrine by citing a passage from Lotze (Parker, p. 140; Lotze, *Metaphysic*, E. Trans., 258), which depicts an existing S as having all the past S's beside it. Lotze is here suggesting an absurd consequence which might imaginably be ascribed to the doctrine that time is unreal, but, in his opinion, without logical justification. I do not think it is clear how Mr. Parker means to use the passage. I never saw the thesis maintained which he appears to be criticising.

Doctrines which take the past as transmuted in the Absolute or contained in a huge specious present are ruled out of the discussion; but the former is more than once referred to with the gloss which I have noticed in other American writers, that the Absolute is a subject of knowledge, a sort of omniscient being. This again I have never seen maintained.

What, it is asked in conclusion, is historical truth, and how does truth be or exist? Is it psychological explanation or individual appreciation? The answer is, Both; it is explanation and individual portrayal, the latter approaching the nature of art (*cf.* Croce). A difficulty seems to be needlessly

[1] The author kindly informed me in answer to my inquiry that on p. 108, ll. 22 and 24, the words "first" and "second" are transposed by mistake.

raised by speaking of history as a science. In fact, surely, the true narrative judgment (and history as such must be narrative) is inherently debarred from containing scientific truth, and the science and portraiture in history are like oil and water.

Historical truth *is*, as eternal laws *are*, not in any existence. And here a significant question is relevant, which is raised in an earlier chapter. We can know the past more thoroughly than it knew itself—as better or worse than, as seemed in and to the past, it *was*. Here we are referred to a distinction between essence and existence. "Kant as understood is not Kant's past existence, but Kant's ideal and eternal essence." It is the well-known view that the truths about a thing do not belong to the thing. Yet surely they must reveal characteristics of the thing. A man's *real* thought is as much a fact in his life as the date of his birth; and if we state it wrongly, we speak falsely. Therefore it does seem as if the past were always being transmuted *from* what we took to be its existence *into* true existence. I can hardly understand how "existential and ideal truths" can be "side by side and at peace".

The author indeed holds that the essence of all changing experience is an eternal reality. If we could push home the problem of the relation of existence to this reality, we should get more light on the "being" of the past.

The tractate raises a number of stimulating problems—more, as it seems to me, than were really necessary for arriving at its conclusion stated above; which appears perfectly sound, if the investigation is not carried into the problem which the author sets aside.

B. Bosanquet.

Plato: Moral and Political Ideals. By A. M. Adam. (Cambridge Manuals of Science and Literature.) Cambridge University Press, 1913. Pp. vii, 153.

In the growing interest in Plato as a metaphysician and theorist about the foundations of mathematics there is a possible danger that his immense importance as a moralist and a trainer of statesmen may be unduly overlooked. Hence a little work like that of Mrs. Adam which expressly confines itself to the exposition of the ethical and political ideals of the great philosopher is exceedingly opportune. In the main I would warmly recommend the little book, the general standpoint of which is naturally much the same as that of the lamented Dr. Adam's great edition of the *Republic*. Two points, however, call for some remark. Mrs. Adam has given a very fresh and accurate account of the ethical content of the dialogues down to, and inclusive of, the *Theaetetus*. But after all Plato's ripest practical wisdom is to be sought in works which fall outside these limits, notably in the *Laws* and *Philebus*. The *Laws* are mainly drawn upon in the present volume for matters of detail in which there is some disagreement with the *Republic*, and the *Philebus* is only appealed to once, and then not on an ethical but on a metaphysical point, the dubious identification of God with the *ἰδέα τἀγαθοῦ*. This means that some of Plato's most important ethical positions, such as *e.g.* the criticism of pleasure, and the doctrine of the mean, as well as his matured verdicts on the types of political organisation cannot be adequately represented. It is perhaps a consequence of this comparative neglect of Plato's latest social and ethical works that his personal intervention in the affairs of Sicily and its consequence in making the Academy a recognized source of actual legislation receive no notice. The other point is that Mrs. Adam accepts (though with a word of warning in her Preface) the loose current accounts of Plato's relation to Socrates, and even outdoes them. The im-

mediate result of this is that Socrates becomes a highly problematical figure in the story. Even the identification of virtue with knowledge ascribed to him by Aristotle and presupposed in Plato in the constant appeal to the analogy from the "crafts," is held to be a "development". This is on the strength of a well-known *mot* of the Socrates of Xenophon, that when one wants to know the upshot of an adventure one must go to an oracle. Now Xenophon does not say, as Mrs. Adam makes him say (p. 39), that "all judgment and forecasting whether any given action is *good in itself* (italics mine), and likely to be beneficial in its results," is beyond the province of human reason. He only says that there are many actions of which human foresight cannot decide whether they will be profitable in their results, and that for light on that point one must "consult the oracles". That human reason can judge of the "goodness in itself" of an action is assumed throughout the *Memorabilia*. It is the very reason why Socrates is represented at III. 9 as holding that virtue can be "taught". Hence the intrinsic goodness of actions belongs for Xenophon's Socrates to the sphere of ἃ μαθόντας ποιεῖν ἔδωκαν οἱ θεοί, and there is no ground to appeal to Xenophon as evidence that the doctrine "virtue is knowledge" is "development". I note also that owing to the assumption that "Socrates" in the dialogues may always be taken to mean "Plato" Mrs. Adam falls unconsciously into the chronological error of thinking of Plato as personally an opponent of "sophists". Properly speaking, of course, the whole sophistic age, with its well-marked moral characteristics, ended before Plato had grown out of boyhood. If we wish to illustrate his educational theory and practice by contrast, it is not to the peripatetic lecturers of the fifth century, but to the ideal held up in the works of Isocrates that we should give our special attention. To appreciate Plato aright we have always to remember that he belongs to the time of Eubulus and Isocrates, not to that of Protagoras and Pericles. If Mrs. Adam had kept this steadily in mind she would probably have judged less favourably of the attempts to credit Plato personally with the bitter attacks on "democracy" in the *Gorgias* and *Republic*. For it is quite a definite species of democracy which is in question there, the Imperialistic democracy of Pericles and his successors which made the Peloponnesian war and ruined itself by its aggression in Sicily. The "democracy" under which Plato's works were written was quite another affair, and this, no doubt, is why democracy is spoken of so much more favourably in the *Politicus* and *Laws* where the verdict is not pronounced by Socrates, and does not refer specially to a "Jingo" democracy.

A. E. Taylor.

Heredity and Memory. By Prof. James Ward, D.Sc. Cambridge University Press, 1913.

In this "Henry Sidgwick Lecture," delivered at Newnham College in 1912, Prof. Ward deals with heredity in terms of memory, urging that Dr. Francis Darwin, following Hering and Semon, was amply justified in contending "that ontogeny—the building up of the embryo—is actually and literally a habit". It is true that in the chain of individuals which any given genealogical sequence has entailed, habits, in this broad sense of the word, are transmitted through the fertilised ova. But if, as a matter of fact, the more stable habits acquired by one generation are so transmitted to the next generation, through the germinal bridge which connects them, what more is needed to establish the theory that, provided only we look at the world of life from a spiritualistic and not from the usual naturalistic standpoint, the secret of heredity is to be found in the facts of memory? This involves, no doubt, the identification of life

and mind. But the principle of continuity gives us, says Prof. Ward, the right to do this. If it be urged that, on this theory, the earlier forms of retention are explained in terms of a later-developed mental product—the lower and simpler implying the existence of the higher and more complex—Prof. Ward replies that where, as in the case of life, we are seeking to interpret the meaning of a continuous series we must start where that meaning is clearest, where it is best known and most definite, not where it is least known and most inchoate.

It will be seen that Prof. Ward opens up several controversial questions. They are treated with his well-known acumen and lucidity and from the standpoint with which his name is honourably associated. His vigorous defence of the inheritance of acquired characters is a valuable contribution to the philosophical discussion of this much-debated question. But one grows rather tired of general arguments on this side and on that. The matter will have to be settled on the basis of statistics collected with care and methodically discussed. Acquired characters must be so defined as to render the issue perfectly clear. Then, as the outcome of patient work, we shall get, if Prof. Ward is right, a definite correlation value for the inheritance of this or that acquired modification.

Whether memory implies pre-existing engrams or engrams imply pre-existing memory is a question that turns partly on definition of terms. But the answer depends perhaps in greater measure on a fundamental bias in method of interpretation—naturalistic or spiritualistic. Prof. Ward stands for the latter ; and anything he writes on the subject is worthy of attentive consideration.

C. Lloyd Morgan.

Socrates and Plato. By G. C. Field, M.A., B.Sc., Lecturer in Ethics and Politics at the Victoria University, Manchester. Oxford : Parker & Co., 1913. Pp. 40.

Mr. Field holds a brief for the Socrates of convention : 'It is an ancient mariner, And he stoppeth one of three'. That is to say he relies as portraiture upon Xenophon's *Memorabilia*, with the support, such as it is, of Plato's dialogues of search and certain remarks of Aristotle. The construction against which he is in protest is so highly speculative, and in the form in which it is set forth by Prof. Taylor often so needlessly provocative, that some of Mr. Field's arguments palpably strike home. He has made a real point from Aristotle, *Metaphysics*, 1086, B 2 which we have been too much inclined to treat as simply a dittograph of 1078, B 28. He has used Aristotle's criticism of the communism of the *Republic* in a suggestive way. Did the historic Socrates, we may ask, treat what the Pythagoreans practised as an order of Knights Templar as an important 'social myth'? Elsewhere Mr. Field is less effective. While we incline to sympathise with his impression that the *Memorabilia* stands on a different plane from Xenophon's other Socratica, he at least is bound to maintain with Prof. Burnet the unity of authorship in all. And it does seem to discount Xenophon's accuracy in this regard—the attempt to bring in the credibility of the *Hellenica* as a point against Prof. Burnet is merely perverse—that he says he was present when Socrates made allusion to the death of the younger Cyrus. There is a logical gap too in Mr. Field's argument from the *Magna Moralia*. It is 'a later work of the Aristotelian School,' and 'means that *Aristotle and* those who learnt from him' distinguished Socrates and the Platonic Socrates. Or again : the parallel from Jowett and Green could only have weight if Green had represented the *Prolegomena to Ethics* as the table-talk of Jowett. Mr. Field says little of Aristophanes and nothing of the

point made by Prof. Burnet as to the science of Socrates in the *Phædo* and the *Clouds*. It would be of interest to see what the rival constructionists can get from the fact of the double recension of the latter. I venture to think that Mr. Field makes too little of the real difficulty of the charge of introducing new *δαιμόνια*. Nor, in view of the whole data, is the retort as to the historical character of the *Phædo* adequate, that Plato could venture on a higher truth than fact, because his contemporaries were so well aware that it was not fact. Such a reading of the *Phædo* would still involve too unpleasant an æsthetic and moral paradox.

HERBERT W. BLUNT.

The Classical Moralists; Selection Illustrating Ethics from Socrates to Martineau. Compiled by BENJAMIN RAND, Ph.D. London: Constable & Co.; Boston and New York: Houghton, Mifflin Company, 1910. Pp. xix, 797. Price 10s. 6d.

This book will be found exceedingly useful by students attending a course of lectures, or reading a text-book, on the history of ethical theory. It is out of the question that they should check the lecturer or text-book by reading for themselves, *pari passu* even, only the most important works of all the great ethical thinkers. And the danger is that they end by gaining no first-hand acquaintance at all, and carrying away only ideas distilled at second- or third-hand. Hence a book like this fills a real gap. And, on the whole, the extracts are well chosen: the right things from the right men. Some, of course, like Plato, lend themselves much less easily to selection than others, and in their case there must always be a keen sense of fragmentariness and loss. And the more thoroughly one has studied a writer, the more one is inclined to regret the exclusion of this or that favourite passage. Against all such criticisms, Dr. Rand will, no doubt, plead with much force that it is impossible to satisfy all tastes, and that within the inevitable limits of space he has tried to do his best. Even so, I am not sure that the opening section from Xenophon's *Memorabilia*, bk. iii., chap. viii., deserves inclusion in preference to others which have been omitted, and it is certainly a pity that the extracts from Plato are taken exclusively from the *Republic* (one thinks of passages in the *Symposium*, the *Phædo*, the *Philebus*), and that there are no passages from Aristotle's account of friendship. On the other hand, the passages from Lucretius and Marcus Aurelius belong to those which one would not miss; and St. Augustine, Peter Abelard, Thomas Aquinas seem adequately represented for the needs of the ordinary student. The wisdom of wholly omitting Part iv. of Spinoza's *Ethics* may certainly be questioned, compared with, *e.g.*, the disproportionate length of the extracts from Adam Smith. And many, no doubt, will feel that they could have done w thout fourteen pages of Richard Price. The inclusion of Beneke may be defended as drawing attention to a writer who is, probably, unduly neglected, and yet one grudges the space allotted to him (twenty pages) when one thinks how much of the work of greater men has had to be omitted. J. S. Mill is well represented. and the chapters from Sidgwick, Bradley, Green and Martineau will, it is to be hoped, have the effect of sending students to their easily accessible works. In short, notwithstanding some grumblings, one gladly acknowledges that Dr. Rand has discharged a very difficult task with uncommon success, and has produced a book for which the average student of Ethics has every reason to be grateful.

R. F. A. H.

The Metaphysic of Mr. F. H. Bradley. By Hastings Rashdall, F.B.A. London: Published for the British Academy, by Henry Frowde, Oxford University Press, 1912. Pp. 27. Price 1s. 6d.

Students of *Appearance and Reality* should not miss this excellent paper on Mr. Bradley's metaphysical theory. Dr. Rashdall finds in this theory 'a fundamental and irreconcilable contradiction between three sharply opposed points of view' (p. 10), *viz.*: (1) Idealism, (2) Spinozism, (3) Phenomenalism. Under the heading of 'Spinozism' Dr. Rashdall attacks above all Mr. Bradley's characterisation of the Absolute Experience as an immediacy in which all distinctions of thought are 'merged' or 'transcended,' even the distinction between the thinker and the objects of his thought, and as a corollary he challenges Mr. Bradley's right still to describe in terms of consciousness or experience something which has 'no power of knowing either itself or anything else,' and which, in short, no longer being a self or person, can only be described as a 'neuter' and 'a thing'. Under the heading of 'Phenomenalism,' Dr. Rashdall urges some of the well-known difficulties which beset the relation of the Absolute and its Appearances, and he does well to point out the further complications which result from Mr. Bradley's statement in Mind, N. S., page 179, to the effect that there is no reality 'outside of and apart from the totality of finite mind'. Incidentally, there is criticism of a good many subordinate points, *e.g.* the identification of 'any fabric of coherent truth with reality' (p. 17); the principle of the transformation of experiences ('no piece of conscious experience can ever be banished from the realm of reality, or ever become, for a mind that truly knows, other than it was,' p. 17); the self-contradictoriness of relations (p. 21), etc. And there are brief references to the positive views with which readers of Dr. Rashdall's other works are familiar, such as the relation of the Divine Mind to lesser selves, the reality of the time-process, and the place of evil in a world in which there is also moral effort for the realisation of good. Altogether, Dr. Rashdall has given us, in brief compass, an extraordinarily interesting and stimulating paper.

R. F. A. H.

Moral Action and Natural Law in Kant. By E. Morris Miller, M.A. Melbourne: George Robertson & Co., 1913. Pp. 59.

If this little book, the author of which apparently holds a position at the Public Library, Melbourne, may be taken as a sign of a growing interest in the study of philosophy among the non-academic section of the educated public in Australia, it is much to be welcomed. In substance, it gives an account of Kant's conceptions of Moral Law, Natural Law, and Freedom in their relation to one another, and points out some of the chief difficulties which result from the extreme 'Dualism' of the realms of Nature and Freedom in Kant's Theory. The treatment follows, in general, the lines of E. Caird's work on Kant. I should say the author would have done his audience in Australia a greater service if he had weighted his pages less with technical terminology. Personally, I have found the last section of the book, entitled 'Developments,' most interesting, especially the last few pages on what the author calls 'Ethical Idealism,' which contain, *inter alia*, a plea for more adequate recognition of the individual personality than most of the current theories of the Absolute provide.

R. F. A. H.

Experimental Psychology and Pedagogy. By R. Schulze. Translated by R. Pintner. London: George Allen & Co. 6s.

The chief value of this book lies in the large number (over 300) of admirable illustrations and diagrams, which probably give as good an idea of the apparatus of a psychological laboratory and of the method of using it as can be obtained outside of a laboratory itself. It should prove of great value to those who are unable to enjoy a laboratory training, and yet wish to read intelligently that increasing body of psychological literature which involves some familiarity with the methods of experimental research for its proper comprehension.

The book is especially intended for those interested in the application of psychological methods to the study of the child mind and to the problems of education. But it will also be useful to the student of general experimental psychology. Indeed a number of the experiments described have little direct bearing upon educational topics, and there is perhaps a danger of the uninformed reader supposing that a large amount of costly and complicated apparatus is necessary for experiments in educational psychology; the author scarcely gives a proportionately large amount of space to such experiments—often the most valuable—as can be done with no other apparatus than paper and pen, or at least with such simple materials as can easily be made by any intelligent experimenter.

The chapter upon Correlations is far from complete, but that is to be expected in view of the fact that the German original was published in 1907. Many of the results of experiments summarised in other chapters are also incomplete, and the applications to pedagogy are occasionally crude and unconvincing, but the author frankly admits the limitations of the book from this point of view. His chief aim, to illustrate methods, has been accomplished admirably.

C. W. Valentine.

Outlines of the History of Psychology. By Max Dessoir, Professor in the University of Berlin. Authorised translation by Donald Fisher. New York, 1912. 8vo. Pp. ix, 278.

This is an adequate translation of Prof. Dessoir's book. Mr. Fisher appears to have had the advantage of the author's counsel, and he has rendered into very fairly readable English a work which did not easily lend itself to translation. The style of the later pages does not run quite so easily as that of the earlier part of the book, but I have noticed very few serious inaccuracies. There is, however, passage in a Prof. Dessoir's discussion of Plato's psychology—not in any case one of the most satisfactory parts of his book—where Mr. Fisher makes him say that it is because the soul contains *conceptual images* that it is able to apprehend universals; the German is 'begriffliche Gebilde,' which surely has a less mysterious meaning.

T. L.

La Prière: Essai de Psychologie Religieuse. Par J. Segond. Paris F. Alcan. Pp. 364. 7 fr. 50.

M. Segond, in an elaborate introduction occupying sixty-seven pages, sets out to define with precision what he understands by "prayer" and in what a psychological study of it will consist. Prayer is not merely a special request for a special object, it is an attitude of the religious life, or rather that life itself. A psychological study of prayer sets aside the external environment of biological, historical and physiological facts, in

order to describe prayer just as it appears to the souls who pray. The central factor is not a request. "Ou peut avoir l'attitude de prière, et ne pas 'exposer ses besoins'" (p. 36). The essential and characteristic note of prayer is to be found in "meditation" (recueillement). "Vague ou précisée, élévation vers Dieu ou conscience d'une présence indéfinie, demande ou stupeur, la prière implique toujours, même si elle se fait sensation et se manifeste comme ivresse dans la possession du bonheur ou de la nature, une *réflexion*, un commencement tout au moins de 'jouissance du centre,' pour parler le langage de quiétisme, un acte de 'recueillement' ou un abandon au recueillement. C'est là peut-être le caractère constant de la prière" (p. 42). This experience implies the feeling of a presence, and the surrender to this presence takes the form of soliloquy or of dialogue. Prayer, however, contains a request, which need not be for a material object, but for more complet spiritual surrender. Every prayer is a prayer of intercession; the praying soul feels its unity with other souls. This unity is subconscious. The type of prayer which is largely voluntary and intellectual is distinguished from "la prière affective" which invades the soul as a wave of indefinite emotion. The origins of prayer as experienced by mystics are subconscious. M. Segond reserves for a further work the analysis of the nature of the subconscious, but hints (p. 323) that in the views of M. Bergson a solution may be found satisfactory to the biologist, the sociologist and the psychologist alike.

Within the limits marked out by its author this book is a distinct contribution to the study of its subject. Perhaps this appeal to mystical experiences is too predominant, and it is open to question whether these experiences are always precisely such, or are interpretations rather than primary data. The first step in the investigation of prayer may well be just that which M. Segond has taken, but his next step must take him into the unknown. He who invokes the subconscious runs great risk of making a problem masquerade as an explanation; and an origin in the subconscious is no guarantee of quality. The carefulness and judgment displayed by M. Segond justify us in looking forward with interest to the completion of his inquiry, while its tendency and that of his recent book—*L'Intution Bergsoniense*—enable us to divine in what direction his solution will be found.

ARTHUR ROBINSON.

Hegel. Choix de Textes et Étude du Système Philosophique. Par PAUL ARCHAMBAULT. Pp. 222.

Durkheim. Choix de Textes Avec Étude du Système Sociologique. Par GEORGES DAVY. Pp. 220.

Condorcet. Choix de Textes et Introduction. Par J. B. SÉVERAC. Pp. 223.

Ribot. Choix de Textes et Étude de l'Œuvre. Par G. LAMARQUE. Pp. 222.

Paris: Société de Éditions, Louis Michaud. Each 2 fr.

These four books belong to the series already well known—"Les grands philosophes français et étrangers". Without doubt the most arduous task fell to M. Archambault; it is difficult to write a short account of Hegel's philosophy, and not easy to make a selection from his works within moderate limits. The introduction is concise of course, but also

clear, and its readers are referred to an admirable source for further information—*La Logigue de Hegel*, par G. Noël. The passages are selected from the translations of Véra and Ch. Bénard.

M. Davy's study of Durkheim's sociology is wonderfully good, clear in expression and packed with information. It is difficult to imagine a better introduction to the work of the famous sociologist than this little volume.

M. Séverac gives a vivid account of the life, writings and ideas of that ill-starred Encyclopédiste, Condorcet, whom he regards as the most complete expression of his age : "dans la mesure—et elle est large—où le xviii^{e} siècle en France forme un ensemble ayant des contours nets et une physionomie propre, ou peut dire que Condorcet exprime le xviii^{e} siècle tout entier" (p. 30).

The selections from Ribot are preceded by an appreciative preface by M. Pierre Janet and a sympathetic and most capable study by M. Lamarque. M. Ribot's works now extend to thirteen volumes so that a selection has its uses.

ARTHUR ROBINSON.

Ch. Renouvier. Essais de Critique Générale. Troisième Essai : Les Principes de la Nature. Paris: Librarie Armand Colin, 1912. Pp. lxv, 444.

It is hardly necessary to do more than call the attention of readers of MIND to this excellently got-up and moderately priced new edition of Renouvier's well-known *Essay*. Just at the present moment when *Naturphilosophie* is being brought again into honour by the votaries of natural science themselves, the reissue may be deemed particularly opportune.

Über Begriffe und Grundsätze die beim kosmologischen Beweise als bekannt und selbstverständlich vorausgesetzt werden. By Prof. Dr. CASPAR ISENKRAHE (*Wissenschaftliche Beilage zum Jahresbericht* 1908-09 *des Königlichen Kaiser Wilhelms-Gymnasiums in Trier*). Treves: Jacob Lintz, 1909. Pp. 95.

The above embodies the friendly but searching criticism which a professor of physical science feels it his duty to level at the cosmological proof of God's existence such as he finds it stated by Roman Catholic apologists who have adopted it from the manuals of scholastic philosophy in common use.

According to Dr. Isenkrahe most of the axioms taken for granted in this proof are open to objection. Thus, for instance, we find motion described as an "effect" and spoken of for all the world as though the old axiom "*cessante causa cessat effectus*" still held good as it did before the time of Galileo. A body (B) moving at a certain velocity reaches the point L. Here it does not stop but continues on its way towards the point M. Query: Does the continuation of the motion, *i.e.* the transit from L to M, considered apart, require a cause? Previous to Galileo the answer was "Yes," now, it is emphatically "No". According to mechanics in this case it would not be the motion but the cessation of motion which would imply a *mutatio* and hence require a cause. A mere uniform motion in which direction and velocity remain unchanged cannot be said to be an effect requiring a cause, unless of course it be certain that the present motion was preceded by a state of rest, a fact which would have to be proved.

Again, from the existence of the world, scholastics argue that something has always existed, *i.e.* that there exists an Unbecome, seeing that "*ex nihilo nihil fit*". Is this last axiom really self-evident? Cathrein (*Glauben und Wissen*, p. 51 *sq.*) indeed states that the ideas of cause and effect are correlative, and that every effect must therefore have a sufficient cause, in other words everything which begins must have an efficient cause, nothing being able to produce itself as nothing can act before it exists. But this is a mere assertion and no argument. What right has Cathrein to put "beginning" on a par with "effect"? The concept of beginning involves simply (1) non-existence, (2) existence, and (3) the idea of earlier and later; previous non-existence, subsequent existence, such is a "beginning"; all idea of "action" or "cause" is entirely foreign to it, and only to be reached by appealing to the so-called principle of sufficient reason. Of the exact difference between reason and cause Stöckl gives us a good idea when he says (*Lehrb.*, ii., pp. 87, 95), that wherever we find a consequence there must be a sufficient reason, and wherever there is an effect there must be an efficient cause. Accepting his statement as correct, whenever any one asks for the cause of a thing (T) we have a right to inquire why he holds T to be an "effect," and, similarly, if he asks for the reason of an object (O) we may inquire how he has come to look on O as a "consequence".

Some tell us that it is self-evident that everything, in order to exist at all, must have a sufficient reason. Is this really so? Chr. Pesch devotes a section of his *Theolog. Zeitfragen* to the history of the question whether God can be said to have any reason or cause. Among the authors cited who seem to lean more or less towards an affirmative answer are St. Anselm, St. Jerome, Marius Victorinus and Lactantius (*Deus ipse se fecit*). At the opposite extreme, however, we find ancient Doctors of undoubted orthodoxy who exclude from God all cause and even all reason, for instance St. Gregory Nazianzen, St. Basil and St. Chrysostom; the latter even seems to deny that God is *a se* and prefers to take refuge in utter nescience (Οὐ γὰρ δέχεται λογισμὸς εἰδέναι πῶς οἷον τε οὐσίαν εἶναι μήτε παρ' ἑαυτῆς μήτε παρ' ἑτέρου τὸ εἶναι ἔχουσαν). Under the circumstances can it be said that the universality of the principle of sufficient reason is really self-evident? Of everything that happens, of every fire, epidemic, etc., that breaks out, we naturally inquire how it came about, but may we, indeed can we, make such an inquiry concerning the Unbecome? Of what comes from nowhere can it be reasonably asked "Whence comes it?" As commonly stated, the principle of sufficient reason demands that every being have its reason, if not *in se*, then *in alio*. Of this, however, what is the result? A has its reason in B, B in C, etc., P in Q, Q in R, etc., and so on for ever and ever, unless one of the later members be absolutely and in every respect identical with one of the earlier. Any mere partial identity would not suffice, as the principle of sufficient reason would demand the reason of this supposed difference. In the case of the principle of causation we reach the end of the series as soon as we come to an *Ens* bearing no trace of being an effect, but in the case of the principle of sufficient reason this is not so. Hence there is no sense in saying that the sufficient reason of a being is either *in* the being or outside of it. What we must say is that the Unbecome *is* its reason. But observe the consequence: A being must have a reason, otherwise it would not exist. Hence in the present case, where the reason is identical with the being, we must say that if the Unbecome were not, it would not exist. But surely was any proof at all necessary to establish so elementary a truism?

Supposing, however, that the Unbecome really has a reason, where must it be sought? According to some in its "aseity". What is an "*ens a se*"

The expression is certainly ungrammatical, and, seemingly, also quite meaningless. "*Caius a Titio*" as yet means nothing, nor does "*ens a se*" nor "*ens ab alio*"; they are elliptical and incomplete; the preposition "*a*," "*ab*," must denote a certain passivity, but without an explanatory verb we know not which. How, for instance, is the expression to be put in a positive form? "*Ens a se necatum*" gives "*Ens quod se ipsum necavit*," but "*ens a se*"? "*Ens quod se ipsum???*" Evidently something is wanting. A theologian once proposed to Dr. Isenkrahe the use of the present participle of the verb "*sum*," *i.e.* "*ens a se ens*," but this scarcely meets the case as "*ab*," "*a*" requires a passive, whereas "*sum*" is no more passive than "*vivo*".

Others have it that the Perfection of the Unbecome is its reason. What is the Perfect? That to which nothing is wanting? If so, then Perfection is equivalent to plenitude. Within in its own field nothing is superior to the Perfect and whatever lacks perfection is not perfect at all. If this is the case, is it at all possible to speak of "degrees of perfection," of the "more or less perfect," or, worst of all, of the "infinitely perfect"?[1]

Most scholastics, however, according to Dr. Isenkrahe, prefer to seek the reason of the Unbecome in its absolute necessity. What does this absolute necessity mean? We are, of course, acquainted with many things necessary, for instance, for the support of life, for the satisfaction of some longing whether in our own selves or in others. When we speak of a thing being necessary the sentence is not yet complete; it is necessary to . . . for . . . because otherwise . . . etc. Now, in the present case, the "*Ens a se*" exists, because it is necessary, otherwise . . . What is the conclusion? Because otherwise it would not exist? But is this an explanation, and, moreover, does not this same conclusion hold in the case of every single being no matter how humble?

An explanation of the necessity of the "*Ens a se*" might be sought in the possible contradiction involved in the denial of such a being. But of what sort of contradiction are we to think? In the region of thought certain denials do involve a contradiction, for instance if I deny the existence of the unit I should be able to divide the number 100 into non-existent factors, which would be absurd; but such a purely ideal contradiction does not in the least explain the necessity of real existence. Let us take real things. Supposing I deny the existence of the Rhine, instantly I am contradicted by my experience, for I see the river frequently. If I deny my own existence or that of the outer world the result is the same. Finally, if I deny the existence of the Unbecome, I should (if I admit that *ex nihilo nihil fit*) be faced by the same contradiction, as I should be unable to explain the existence of anything at present. In all the three cases the necessity is exactly the same.

[1] On the infinite and finite see Isenkrahe, "Über die Terminologie des Endlichen und Unendlichen," in "Natur und Offenbarung (vol. liv. pp. 129-156, 201-228) where he points out the ambiguity of the words, which are "explained" by others no less ambiguous, such as "term" and "limit," and, used, now in one seuse now in another, first of extended things, then, metaphorically, of qualities, and, finally, of being itself. A thing which is believed to be endless is nevertheless finite ("*ens finitum*"). In the case of qualities, indeed, their intensity may be compared to quantitative extension, and, as both are capable of increase, both may be called "finite". But in the case of being itself ("*ens*"), is it capable of such increase? "*Ens, entius, entissimum*" sounds very much like nonsense.

There is, however, yet another kind of necessity. It may happen that the denial of a thing implies no contradiction in terms, and no direct contradiction with experience, and yet implies one in the undenied remainder. For instance the last-born of a family denies the existence of his father. If his father died before the child's birth there would be no direct contradiction with experience and yet there would be one in the undenied remainder, for how will our friend explain his own existence and that of his brothers and sisters? Or again, if I deny the existence of the moon, besides the direct contradiction with my experience, there would be a contradiction in the remainder, for how should I then explain the tides? But now, supposing I deny my own existence and that of every creature. Result: Contradiction with experience, but apparently none with the remainder. Finally, supposing I deny not only my own existence and that of every creature, but also that of the Unbecome. Again the result is a contradiction with experience, but quite certainly there is none with the remainder seeing that, *ex hypothesi*, nothing would remain. Hence for the denial of the Unbecome not to lead to a contradiction the existence of all must be denied, and this we cannot do without contradicting our experience. In this sense the Unbecome is necessary, but, here again, we must note that this same necessity, based on experience, belongs to every single being the existence of which we know by experience.

So far therefore we have found no necessity peculiar to the Unbecome. Nor do the manuals of scholastic philosophy enlighten us. They tell us for instance that metaphysical necessity implies the intrinsic impossibility of the contradictory, but they fail to tell us what "intrinsic impossibility" means. After all, a contradiction must be a contradiction with something; what is the something? Tongiorgi makes such impossibility to depend on the contradiction in terms involved by its opposite, but does this apply in the case of the Unbecome? Supposing I say: The Unbecome does not exist, is the statement self-contradictory? What contradiction is there between the denial of existence and the denial of becoming? O did not become and does not exist, where is the contradiction in terms?

Among the objections which Dr. Isenkrahe accumulates against this favourite proof of the schoolmen, a few seem to rest on a misunderstanding or on faulty definitions peculiar to the authors he is criticising. On page 18 the hypothetical abandonment "Ein Körper soll [von Gott] . . . belassen und nicht verändert werden" is, I fear, impossible from a scholastic standpoint, even as a hypothesis. On page 21 there seems to be a confusion of ideal with real space. On page 50 Dr. Isenkrahe argues that if the essence is "*id per quod ens est id quod est et non aliud*" then it cannot be multiplied. His objection here is, however, based on Stöckl's faulty definition which would apply rather to the principle of individuation than to the essence. Page 52: The essences which "postulate existence" are those existing in the Divine Intelligence. Page 53: When Tillman Pesch speaks of "*ratio*" as being equivalent to "*essentia*" he is thinking of the "*ratio essendi*" not of the "*ratio existentiæ*". Page 54: It is rather dangerous to argue on the term "*principium*" as it so frequently stands, not for "principle," but for "beginning".

C. Dessoulavy.

Die Philosophie von Richard Avenarius: Systematische Darstellung und immanente Kritik. Von Dr. phil. Friedrich Raab. Leipzig: Meiner, 1912. Pp. iv, 164.

It is a little curious that, especially in these days of "radical empiricism," more attention has not been given in our own country to the work of

Avenarius. For of all empiricists Avenarius, so far as he is true to his own presuppositions, is the most consciously and insistently radical. If his primary assumptions are granted, and the validity of his deductions from them established, there can be only one possible philosophy for mankind, a pure and absolute positivism which has got rid of everything in the way of ideal "construction," "interpretative hypotheses," "standards of valuation," and even of every vestige of the distinction between the psychical and the physical. The sole task of philosophy is to "comprehend" a "given" world, and by "comprehension" is meant not the understanding of the world as an ordered system, but merely the apprehension of such part of its content as may form "our" environment in accord with a general formula applicable to all acts of apprehension. Probably the chief reason why so elaborate and conscious an attempt to work out the implications of positivism is still so little known to English readers lies in the painful elaboration and unfamiliarity of the exceptionally hideous technical terminology devised by Avenarius out of a fear that the use of a less extraordinary vocabulary might involve associations which he was anxious to avoid. His monstrous new terms were intended, like the symbols of some new calculus, to derive the *whole* of their suggestive force from their formal definitions.

As an introduction to the study of the *Kritik der reinen Erfahrung*, Dr. Raab's study merits high praise. The first or "expository" section is a model of succinctness, especially when the difficulties it has surmounted are borne in mind. The reader will there find the main positions of "empirio-criticism" arranged in a logical order, and with careful definition of the leading technical terms. The second, or critical, part is an excellent piece of work, though not at all easy reading. The critic's task is all through a double one. He asks (1) Whether Avenarius's conclusions are true to his presuppositions; (2) Whether the presuppositions themselves are truly philosophical. Avenarius is thus made to criticise himself in highly effective fashion. The result of the "immanent" criticism of the inner logic of the system is not, on the whole, unfavourable. It is found that, so long as we confine the work of the philosopher to the "comprehending" of the given, in Avenarius's sense of the phrase, the *Kritik der reinen Erfahrung* is fairly self-consistent in its analysis of the process of "comprehension," though there are developments which are not warranted unless we take into account not merely a theory of experience but a theory of knowledge in general. Empirio-criticism comes off worse on the second score. It is a false positivistic assumption that, even as cognitive, mind has no task beyond that of "comprehending" the "given" in the simplest and most convenient formulæ. Avenarius is driven by this assumption into the manifest fallacy of confusing judgments of value with judgments of fact. The consequence is that, if he is to be consistent, he can attach no real meaning to the term "truth". Since the proposition "this is true" is to be a statement of *fact*, not of value, it can only mean something like "this is what every man will some day actually believe". Thus before declaring *any* statement to be true, we might be called on to determine by the calculus of Probability the chances that the statement ever will be accepted by all men whatsoever. And, of course, the same considerations affect the principles of the calculus itself, and so on, *in indefinitum*. Thus we see that Positivism systematically carried out as a theory of first principles destroys itself. The promised goal of an experience which is "pure," in the sense that it contains nothing but "the given" *as* "given" is an intellectual chaos. We must say therefore that the *Kritik der reinen Erfahrung* as a *philosophical* account of the process of understanding the world is a failure, thanks to the one-sided way in which it identifies "understanding" with

"comprehending in the most economical formula". But if we confine our attention to those natural sciences which do aim simply at concise and accurate description of a "given material," Avenarius has given a valuable and, in the main, consistent account of the steps by which their descriptive formulæ are reached.

A. E. T.

L'année Psychologique. Eighteenth Year. Published by Larguier des Bancels and Dr. Th. Simon. Paris: Masson et Cie, 1912. Pp. 525. Price 15 francs.

The volume opens with appreciative articles by Th. Simon on Binet and by Des Bancels on his work. A good photograph of Binet is reproduced. B. Bourdon. 'La perception des mouvements de nos membres.' [It is not definitely established that the sensitivity of the articular surfaces plays an essential part. Deep sensitivity is not excluded. The perception is not destroyed by luxation. We do perceive the movements of the tongue, larynx, soft palate. Theory of derivation from simple sensations of tension and pressure by association with veritable (visual) sensations of movement.] A. Imbert. 'Vitesses relatives des contractions musculaires voluntaires et provoquées.' [If tracings are taken direct from an electrically stimulated muscle, the tangent of the angle made by the rise in the tracing, *i.e.*, the height of the apex of trace upon the time taken to rise thus far, is constant. Voluntary contractions are not nearly so fast or so regular in their speed as involuntary.] Pierre Bovet. 'Les conditions de l'obligation de conscience.' [An interesting and stimulating attempt to found moral theory upon a purely psychological basis by a study of the part played in the consciousness of duty by the '*consigne*' (instruction or determining tendency). Duty is the perception of a conflict of two tendencies of which one emanates from an 'instruction'. Habit alone does not form instructions, but collective custom does. Thereon is based not only the typical moral 'instruction,' but the special forms of taboo and of categorical imperative. The acceptance of an instruction from another person presupposes between him and the subject a '*rapport*' of a special nature, of which love and fear are in varying amounts the constituents. That this '*rapport*' is necessarily social is a gratuitous supposition.] P. Souriau. 'La délimitation de la psychologie.' ["Elle s'intéresse surtout aux résultats ultimes de cette évolution qui de la matière brute a fait sortir la vie et enfin la pensée. Plus elle s approche de la pure activité mentale, plus elle se sent sur son terrain."] Albert Leclère. 'La loi de préformation et de prédétermination en psychologie.' [If psychology is to hold its place amongst the sciences, it must see that it is as deterministic as possible while remaining rigorously experimental. This determination is just the affirmation that there is nothing absolutely new in what seems the most novel; the astonishing is the complex and that is reducible to the simple which is familiar. The only novel or noteworthy thing in complexes is the *moment* when an otherwise familiar law begins to act upon the mass of routine elements which constitute the complex. Also discussion on the origin of ideas, the mechanism of emotion, the nature of the tendency, etc.] R. L. 'Études techniques sur l art de la pe nture.' 1. La peinture grasse. [For example, Velasquez and Corot at times, the landscapes of Henner, but especially Boulard and Guillaumet. The treatment of the lights, shadows, etc., in this class of work.] 2. English painting of the eighteenth century. P. Lapie. 'Avancés et retardés.' [A preliminary notice of experiments. Intellectual precocity is rather due to special inten-

sity of vigour of body and mind than to really superior intelligence.] O. Bertobag. 'Quelques réflexions méthodologiques à propos de l'échelle métrique de l'intelligence de Binet et Simon.' Goddard. 'Résultats obtenus en Amérique à Vineland, N.J.' [With B.S. tests.] Umberto Saffiotti. The B.-S. tests 'modifiées selon la méthode Trèves-Saffiotti'. [These three papers give the reader a general popular account of the work and criticism of their authors.] Dr. Sullivan. 'La mesure du développment intellectuel chez les jeunes délinquantes.' [Tentative work with the B.-S. tests carried out on inmates of Holloway Prison.] A. Giroud. 'La suggestibilité chez les enfants d'école de sept à douze ans.' [Preliminary experiments showing that suggestibility diminishes regularly with age. Method-series of stimuli, lines and weights of same size, of which the first five, say, are of increasing magnitude and the last ten or so equal: also verbal suggestions on names of colours.] A. Maeder. 'Sur le mouvement psychanalytique. Un point de vue nouveau en psychologie.' [General introduction to this subject in light of author's personal experience in interests of Latin races to whom the work is still rather unfamiliar.] Ed. Claparède. 'La question du sommeil.' [Discussion of criticisms and confirmations of his theory of sleep as an instinct, with an appendix on dreaming as the bait for, as well as, according to Freud, the guardian of sleep.] Three surveys of recent literature: Th. Ruyssen. 'Le problème de la personnalité dans la psychologie religieuse.' Georges Bohn. 'Les progrès récents de la psychologie comparée (1906-1911)'. [Chief interest towards physico-chemical researches.] Aug. Ley. 'Les enfants anormaux.' Pierre Bovet. 'Un institut de pédagogie expérimentale. Institut J. J. Rousseau.' [Opened in Geneva in 1912.]

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VIII.—PHILOSOPHICAL PERIODICALS.

British Journal of Psychology. Vol. v., Part 2. **Edward Bullough.** 'Psychical Distance as a Factor in Art and an Æsthetic Principle.' [Psychical Distance (distinguished from spatial distance of a work of art or temporal distance of events represented) involves the assumption of an objective attitude towards the æsthetic phenomenon, our practical impulses being inhibited. Distance primarily gives dramatic action its unreality, rather than *vice versâ*, for given distance "all the (real) world" may appear as a "stage". The artist must adopt the distance attitude, or he cannot treat his own experience artistically. Under-distancing is the common failure of the subject; an excess of distance a failing of art, producing impression of artificiality. Both actual spatial distance and temporal distance are a help to psychical distance, and these are impossible in the case of the lower senses. This conception of distance is applied to the distinction between the sensual and the spiritual, and also to the antithesis individualistic and "typical"; it is further suggested as affording a criterion between the beautiful and the merely agreeable, the latter being a non-distanced pleasure. The man *qua* artist is distanced from his ordinary self so that the theory of art as self-expression is misleading.] **E. M. Smith.** 'Some Observations Concerning Colour Vision in Dogs.' [A record of a prolonged series of experiments too full of detail to analyse adequately. The method of reward and punishment was used at first, but subsequently the punishments (electric shocks) were abandoned as causing either too much effect (and producing great fear) or no effect at all. Colour preference experiments indicated preference for the darker colours, red and blue before yellow and green, red especially causing eager positive reactions. By an "approximate brightness-value series" of experiments, green and yellow were shown to be almost as bright as white for the dog J, the most satisfactory subject. No grey was confused with any colour by J. Practice resulted in considerable improvement of colour discrimination, but very slight improvement of brightness discrimination; further prolongation of experiments resulted in loss of interest and worse discrimination. Colour threshold apparently very high, but here again there is great improvement with practice. Some evidence of "transference of improvement," and of very striking retentiveness of training effects, even after ten weeks. Training effect tends to give way under fatigue, to original preference for red. Evidence given of deliberate comparison. Formation of discrimination habit specially difficult when it involved rejection of an initially preferred colour. "Position error" also caused considerable difficulty. Author concludes (1) that sense and memory of position are of far greater importance and significance to dogs than sensations received from light stimuli; (2) that discrimination of brightness is more fundamental than discrimination of colour, which is at the best unstable, and only effective when the animal has learned to neglect the sense of position and mere differences of brightness. It is suggested that differences between individual animals and between various breeds

may account for divergence of results gained by different investigators.] **Godfrey H. Thomson.** 'A Comparison of Psychophysical Methods.' [Methods of Right and Wrong Cases, of Minimal Changes, and of Serial Groups applied in experimental investigation of the cutaneous spatial threshold. New Method of Non-consecutive Groups also used. Such Methods of Experimenting distinguished from Processes of Calculation after data have been collected; comparisons of Limiting and Group Processes and of Limiting and Constant Processes. Discussion of mathematical theory underlying the Method of Serial Groups, and of means of comparing the probable error of the three methods. In experiments devised to afford means of comparison between Methods of Right and Wrong Cases, and of Minimal Changes, two out of six subjects were aware of the different methods in use. The thresholds of these "informed" subjects were higher when the Method of Right and Wrong Cases was used than when the Minimal Method was used; for uninformed subjects the tendency was the opposite to this. Improved method of totalling in the Constant Process suggested. Demonstration of changes of the threshold during a sitting, practice lowering the threshold, though after about fifty judgments the threshold was raised again, apparently owing to fatigue. Very close attention on the part of the subject seems to increase the variation of the threshold. Author concludes in favour of Group Methods, but suggests a lowering of the usual arbitrary demand for 80 per cent. right judgments.]

PHILOSOPHICAL REVIEW. Vol. xxi., No. 6. **F. J. E. Woodbridge.** 'Consciousness and Object.' [Reply to Thilly. "The object figuring in a conscious perceptual situation differs from the object out of it in the possession of consciousness." This is self-evident: but the distinction between consciousness and object can be defined only in a situation where that distinction exists; and if the distinction is defined, it is that distinction and no other,—if I distinguish between objects and consciousness, the objects are not the consciousness. "Consciousness looks on; there is nothing else left for it to do." Consciousness does not even look on; it is not impotent, but non-potent; and that determination raises the question of its nature.] **C. L. Franklin.** 'Implication and Existence in Logic.' [Against Russell. The phrase 'p implies q' is poorly chosen to represent the manifold relations of logic, first because it derives a conclusion from a single premiss. Moreover, the symmetrical forms of speech are alone safe if one is to avoid the danger of wrong conversion. The 'necessary and sufficient condition' of the mathematician should become current in philosophy under the better title of 'sufficient and indispensable'. Again, Russell's phrase, which is universal, ignores particular propositions, and is thus one-sided. Lastly, the phrase fatally obscures the existence of the existence-term; in fact, the concepts 'existent things' and 'non-existent things' are already existent in every statement that can be made, and are not confined to the existential proposition. These criticisms are illustrated by reference to Marvin's paper on The Existential Proposition; and the article ends with a plea for the philosophical use of an elementary and sane symbolic logic.] **M. W. Calkins.** 'Henri Bergson: Personalist.' [Bergson is primarily a personalist, an idealist of the renaissant spiritualistic school. In his doctrine of self and its environment the idealistic character of his teaching is obvious. In his doctrine of nature, of the universe in its totality, the personalistic interpretation finds a difficulty in the concept of 'matter'. Yet on the whole his view of nature is allied to that of Leibniz, Fechner, Ward; he is a pluralistic personalist. It is an error,

both in Bergson himself and in his critics, to stress the ultimateness of change and freedom in his system, and to neglect the enduring, willing, developing self.] Reviews of Books. Notices of New Books. Summaries of Articles. Notes.—Vol. xxii., No. 1. **R. Eucken.** 'Knowledge and Life.' Foreword to *Erkennen und Leben*; critique of pragmatism and biologism. The task of thought is to free the course of spiritual activity from external facts, and to expand and develop it into an independent world. In performing this office, thought passes through the stages of criticism, creation and work.] **E. L. Schaub.** 'Hegel's Criticisms of Fichte's Subjectivism.—II.' [The criticisms are substantially valid; for Fichte never saw clearly the inseparability of ideal and real, universal and particular, or that the fundamental philosophical principle must be a concrete unity expressing the synthesis of ego and non-ego, subject and object.] **W. Fite.** 'The Man of Power; a Reply to Professor Rogers.' [For individualism the sole basis of obligation is a mutual understanding, which as such is held to imply a contract. Obligation therefore lies upon the rich and powerful, if and so far as they are intelligent. Discussion. **M. W. Calkins.** 'Unjustified Claims for Neo Realism.' [The neo-realist wrongly postulates a positive body of scientific doctrine; dogmatically dismisses the egocentric predicament; and appeals to common sense as only the naïve realist may.] Reviews of Books. Notices of New Books. Summaries of Articles. Notes.

Psychological Review. Vol. xix., No. 6. **K. Dunlap.** 'The Nature of Perceived Relations.' [We may distinguish six theories of the nature of perceived relations. The first five — the sensational theory (Condillac in Brown); the scholastic theory (Maher, Angell); the representative theory (having its root in Descartes); the kinæsthesis theory (Titchener); and the theory of relational states of consciousness (Brown, Spencer, James)—must all be rejected. There remains the theory of relational elements in content, or the empirical theory of relations, which holds that real relations of real objects are really perceived; that the elementary *percepta* (sensibles, relations, feelables) are not parts or functions of a perceiving ego, or conscious means of perceiving something else; that there is no difference in consciousness corresponding to the three kinds of elementary contents; and that, probably, no element of content is ever perceived alone.] **E. K. Strong.** 'The Effect of Length of Series upon Recognition Memory.' [Experiments with successively exposed advertisements. The percentage of correct recognitions decreases, and that of incorrect increases, as the length of the series increases; few incorrect recognitions, however, are made; the ability to know that we have not seen is more strongly fixed than the ability to pick out what we have seen. Recognitions not attended by a feeling of absolute certainty are practically no better than random guesses. A true measure of recognition-memory must take account, not only of the percentage of correct recognitions, but also of the relationship between correct and incorrect (mistaken) recognitions.] **G. Rand.** 'The Effect of Changes in the General Illumination of the Retina upon the Sensitivity to Colour.' [Quantitative study of the influence of changed illumination on the induction of brightness by the surrounding field (effects upon limits of colour-sensitivity, and upon colour-limens at different degrees of eccentricity). The influence is very marked, especially when the stimulus is surrounded by a white field; it cannot be eliminated even by the use of a campimeter-screen of the brightness of the colour, unless the general illumination of the room be held constant. Change of illumination also influences the action of the pre-exposure on the limens and limits of colour;

quantitative work upon this point is promised. It follows from the experiments that illumination must be standardised if observations of any of the brightness-factors influencing colour-sensitivity are to be comparable.] **H. A. Peterson.** 'Note on a Retrial of Professor James's Experiment on Memory Training.' [See *Principles.* i., 666 ff. The net gain for the two observers amounted to 6·2 and 55·9 per cent. No lasting improvement was made in the training. The transfer of training, shown by the percentages, is ascribed to increased practice in the methods of verbatim memorising commonly considered by psychologists to be the best,] Vol. xx., No. 1. **R. Dodge.** 'Mental Work: A Study in Psychodynamics.' [Relative pulse-rate gives a real if a crude psychodynamic measure. With initial relaxation, the experimental introduction of muscular or mental activity invariably increases frequency of pulse. Instruments and experiments (records taken during college examinations) are described, and curves figured.] **I. R. Rosanoff and A. J. Rosanoff.** 'A Study of Association in Children.' [All characteristics in which the test-records of children differ from those of adults are practically obliterated at eleven years of age. Many test-records, typical and atypical, are printed in full.] Vol. xx., No. 2. **E. L. Thorndike.** 'Ideo-motor Action.' [Polemic, partly based on questionary returns, against the theory of ideo-motor action, which is regarded as a survival of imitative magic. The idea has no dynamic potency, save that its physiological parallel evokes the response bound to it by inherited connexions or by the law of habit.] **S. I. Franz.** 'The Accuracy of Localisation of Touch Stimuli on Different Bodily Segments.' [Accuracy is greater with light than with heavier stimuli; it varies at different parts of the body; the average error is less than the two-point limen; no practice effects were found; occasionally wrong localisations, akin to dyschiria, were observed.] **R. Pintner.** 'Inner Speech during Silent Reading.' [Silent articulation is a habit only; practice makes reading without it as good as the ordinary reading with it; practice in reading without it aids ordinary reading, probably by shortening the habitual process.] **K. Dunlap.** 'Obtaining the Mean Variation with the Aid of a Calculating Machine.' **J. B. Watson.** 'Psychology as the Behaviourist Views It.' [Human psychology, structural and functional, has failed to make good its claim as a natural science. Psychology may now dispense with consciousness (save as a tool used by all sciences) and apply itself objectively to the study of animal and human behaviour; its findings thus become the functional correlates of structure, and lend themselves to explanation in physico-chemical terms. All the essential problems of current introspective psychology will thus find their solution.] **J. R. Angell.** 'A Protest.'

American Journal of Psychology. Vol. xxiv., No. 3. **C. A. Ruckmich.** 'The Rôle of Kinæsthesis in the Perception of Rhythm.' [Kinæsthesis is essential to the establishment of a perception of rhythm; thereafter rhythm may be consciously carried, without kinæsthesis, by auditory or visual processes.] **P. Smith.** 'Luther's Early Development in the Light of Psycho-analysis.' [Traces Luther's early suffering to an infantile sex-complex (obsession by the devil, idea of concupiscence). The 'sublimation' was effected largely by external causes (first call to Wittenberg, 1508).] **C. E. Ferree.** 'The Fluctuation of Liminal Visual Stimuli of Point Area.' [Involuntary changes of accommodation are not essential; the phenomena bear out the writer's theory of adaptation and recovery as do the fluctuations of stimuli of larger area. Simultaneous induction is only a minor factor in adaptation.] **E. P. Frost.** 'The

Characteristic Form Assumed by Dreams.' [Rhythms of an explosive kind occur; a residuum of energy from one phase releases energy for a succeeding phase. Each phase contributes an increment of energy to the vasomotor centres, where there is summation followed by discharge.] **M. E. Haggerty and E. J. Kempf.** 'Suppression and Substitution as a Factor in Sex Differences.' [Tests which appear to show that women have a more pronounced tendency than men to protect themselves against embarrassment.] **M. E. Donovan and E. L. Thorndike.** 'Improvement in a Practice Experiment under School Conditions.' [Boys of the greatest initial ability in adding show equal or greater gross gain as compared with boys of the least initial ability, *i.e.* individual differences persist.] Discussion. **E. B. Titchener.** 'The Method of Examination.' [The Würzburg method possesses exploratory, critical and educational value; but the psychology of the higher processes must come from social psychology, and from a method of the type of Ach's systematic experimental introspection.] **Prof. Yuzero Motora.** Fifth Report of the Polish Psychological Society. **S. W. Fernberger.** 'Convention of Experimental Psychologists.' Book Reviews. Book Notes.

JOURNAL OF PHILOSOPHY, PSYCHOLOGY AND SCIENTIFIC METHODS. x., 2. **A. O. Lovejoy.** 'On some Novelties of the New Realism.' [An able criticism of E. B. McGilvary's attempts to explain the metaphysical status of hallucinations, dreams, colour-blindness, and extinct objects on new realist lines, concluding that "the clear implications of conceded facts appear to render a realistic epistemological monism inadmissible".] **C. I. Lewis.** 'Realism and Subjectivism.' [Disputes the inferences which 'new realism' seeks to draw from the ego-centric predicament, and shows that it proves nothing either way. But the writer should grasp that to 'hypothecate' means to mortgage (*cf.* p. 45).] **C. Ladd-Franklin.** 'The Antilogism: An Emendation.'—x., 3. **G. S. Fullerton.** 'Percept and Object in Common Sense and in Philosophy.'—1. [A criticism of 'new realism' from the standpoint of a pragmatic realism. "Common sense accepts percept and object as two," and tacitly admits that "we can see things only as they appear to us". Yet it is not inconvenienced, any more than science, by the 'ego-centric predicament,' and always holds that it perceives objects and the things themselves and not copies. It also distinguishes between changes in percepts and in objects. All this is important, for what would happen to men "if they had been unable, in practice, to distinguish between percept and object, and to know when a change in their experience indicated a change" in the object and when not.] **K. Schmidt.** 'Studies in the Structure of Systems.—IV. The Generating Problem.' ["The fight for postulates and against axioms is a fight for freedom in mathematics and science." . . . "By surrendering the idea of self-evidence as a necessary requirement" mathematics have brought to light "the real logical requirements which a deductive system should satisfy"; "for only if many accounts are possible can there be selection". The postulates selected are determined by the generating problem, for "the postulates of a system are the conditions which make the solution of the problem possible". Thus they are "not arbitrary or mere conventions," but "necessary" for the solution. The generating problem also determines what is 'essential' and the 'same' system has different 'essential' properties according to the particular generating problem. The 'realm' of the system is determined similarly and it and its 'truth' do not extend indefinitely far. Hence the importance of the "separation of generating problems".]—x., 4. **B. H. Bode.** 'The Method of Introspection.'

["The analysis of 'mental states' as such is as impossible as it is unmeaning." "Clearness and obscureness can be construed only with reference to some specific purpose."] Contains also Reports on the Annual Meetings of the American Philosophical Association (J. B. Pratt) and of the American Psychological Association (W. S. Monroe) in the Presidential Address of which Prof. E. L. Thorndike denied the existence of ideo-motor action.—x., 5. **H. A. Overstreet.** 'Philosophy and Our Legal Situation.' [Points out that the doctrine of natural rights, entrenched in the American Constitution, and interpreted by the lawyers in an individualist way, forms a great obstacle to social legislation for the protection of workmen against capitalists.] **H. C. Stevens.** 'A Peculiar Collective Illusion.' [After a day in a motor-boat two out of three persons who slept in a tent awoke simultaneously during the night with an illusion that their tent was floating on the water.]—x., 6. **E. A. Singer.** 'Man and Fellow-Man.' [Argues against Dewey and the absolutists alike that a solipsist *could* arrive at truth by himself if he were granted a succession of experiences and allowed to change his mind, so that he could go on indefinitely correcting his points of view.] **G. S. Fullerton.** 'Percept and Object in Common Sense and in Philosophy.—II. The Common-Sense Doctrine and the Philosopher.' [The latter always starts from the former and exaggerates one aspect of it. Also he does not improve his doctrine but only restricts his audience by using technicalities. "The concrete is the touchstone of abstract theory."] **F. Krueger.** 'Consonance and Dissonance.' [Criticises Stumpf's Theory.]—x, 7. **J. E. Boodin.** 'Individual and Social Minds.' [Argues that if the soul be conceived as a field of energy, both may be conceived as continuous.] **W. B. Pillsbury.** 'Fluctuations of Attention and the Refractory Period.' [Describes observations of certain short pulses of attention coming every 0·2 second or so, fairly constant for all conditions, and uninfluenced by voluntary effort or desire. The inference drawn is that "the apparent continuity of a conscious state is due to the rapidity with which these pulses succeed each other".] **G. P. Adams.** 'Everybody's World and the Will to Believe.' [Criticises it as inconsistent in Prof. G. S. Fullerton to insist that the common-sense world is the only real world, and yet at the end to allow the social phenomenon of the Will to Believe to suggest the existence of another and a better World.]—x, 8. **M. R. Cohen.** 'The New Realism.' [A full and sympathetic review of the book of that name.] **A. O. Lovejoy.** 'Secondary Qualities and Subjectivity.' [Disputes an assertion of M. R. Cohen's that no science actually treats secondary qualities as subjective.]—x., 9. **M. R. Cohen.** 'Jurisprudence as a Philosophical Discipline.' [A (very general) plea for enriching philosophy by a study of law.] **B. H. Bode.** 'The Definition of Consciousness.' [Rejects James's theory which identifies consciousness with objects in a certain setting, but derives it from his 'margin' or 'fringe'. "To recognise that an object existed prior to our experience is to deal with the meaning of things, a meaning to be construed in terms of the fringe on the one hand and of bodily control on the other."] **C. I. Lewis.** 'Interesting Theorems in Symbolic Logic.' [Argues that there is a divergence of meaning between 'implies' in the algebra of logic and in valid inference, which has the consequence that "not only does the calculus of implication contain false theorems, but all its theorems are not proved". Evidently a fundamental criticism to which an answer should be forthcoming.]

Revue de Philosophie. 1er Aout, 1913. **J. Maritain.** 'Intuition in the Sense of Instinctive Knowledge or Inclination.' [Against M. Bergson. Never shall we find in ourselves a faculty superior to intelli-

gence, the exercise of which however is conditioned on our other faculties.] **J. Ferrand.** 'Theosophy, Its Past, Present, and Future.' [Lives of Mme. Blavatsky and Mrs. Annie Besant. Theosophy counts 100,000 adherents, divided into 520 Centres. Doctrines and organisation. A new Messiah.] **A. Veronnet.** 'Cosmogonic Hypotheses.' [Kant on the Origin of Comets, on the Milky Way, on the Continual Formation of Worlds, on the Plurality of Worlds.] **F. Pradel.** 'The Method of Immanence.' [M. Blondel's reply to criticisms of P. de Tonquédec in this Review for March last. Are we to act on faith before we have it?] **J. Le Rohellec.** 'Eight New Manuals of Philsophy.'

Archives de Psychologie. Tome xii., No. 4. **V. Henri** *et* **J. L. des Bancels,** 'Sur l'interprétation des lois de Weber et de Jost: recherches sur les réactions des cyclops exposés à la lumière ultra-violette.' [The time of motor reaction varies with the intensity of stimulus in a way that suggests Weber's Law; this Law is therefore a matter of the sensory periphery, and not of central processes. The limen obtained with intermittent stimuli is, within certain limits, less than the normal limen; Jost's Law of distribution in time may, then, be a matter of physiological induction.] **M. de Maday-Hentzelt.** 'Réflexions sur l'amour maternel: problèmes et méthodes.' [Maternal love has three sources: organic, symbiotic, social. The organic phase is a sort of fever, which finds alleviation in nesting, brooding, etc. The symbiotic phase involves sympathy, and shows emphatic or imitative response to the stimuli from the brood. The social phase is bound up with the common family life, and with the family and social value of the child.] **P. Menzerath.** 'Contribution à la psychoanalyse.' [Notes on a case of *dementia præcox*. The associative series may introduce the complex *a posteriori*, and the experimenter is liable to be deceived. The method of recollection brings out a complex-constellation and lays a lighter burden of interpretation on the experimenter.] Recueil de Faits: Documents et Discussions. **E. Pittard.** 'Un cas de magie sympathique.' [Describes a hunting-charm (concretion from the bird's stomach) used by the Patagonians and Araucanians in the pursuit of the *Rhea*.] Bibliographie. Notes diverses. Tome xiii., No. 1. **J. Froment** *et* **O. Monod.** 'Du langage articulé chez l'homme normal et chez l'aphasique.' [Denies the existence of verbal-motor (articulatory) imagery: the phenomena of motor aphasia can be explained by defect of verbal-auditory images.] **A. Descoeudres.** 'Les enfants anormaux sont-ils amoraux?' [Observations on backward and defective children prove that they are not deficient morally.] **H. Flournoy.** 'Epilepsie émotionelle.' [Report of case; observation and diagnosis. There is an emotional epilepsy whose attacks and crises are of the nature of defensive reactions.] **E. Claparède.** 'Existe-il des images verbo-motrices?' [Maintains the existence of verbal-motor images (which may be independent of the verbal-visual and verbal-auditory) and of an autonomous verbal-motor memory.] Recueil de Faits: Documents et Discussions. **W. Deonna.** 'Apropos d' "un cas de magie sympathique".' [The Patagonian talisman described by Pittard may be thought to give power in the chase, or to endow its possessor with the qualities of the original host, or to bring luck at large; data, as so often, are wanting.] Bibliographie.

Zeitschrift f. Psychologie. Bd. lxiii., Heft 1 und 2. **H. Liepmann.** 'Zur Lokalisation der Hirnfunktionen mit besonderer Berücksichtigung der Beteiligung der beiden Hemisphären an den Gedächtnisleistungen.' [There are three sorts of localisation: regional, as of vision in the

occipital lobes; structural, as perhaps of the spatial moment in perception; and diffuse or distributed, as of any 'real' experience. These must not be confused, nor must the restricted definitions of the physiologists be neglected, when the psychologist is using their results for his own science. The meagre qualifications of the right hemisphere for maintaining the act of speech are but an instance of its general disability for the free recall of movements by memory; this disability itself awaits explanation.] **J. O. Vertes.** 'Das Wortgedächtnis in Schulkindesalter.' [An elaborate study of the immediate verbal memory of school children (groups of fifty-eight and seventy; experiments by seven trained workers in ten classes of six schools; ages six to thirteen), by Ranschburg's method of paired words, which admits of the evaluation of right and corrected reproductions, of failures, and of the time of reproduction. We give a few results. The range of immediate memory, under the conditions, was slightly over 80 per cent. The average time of right reproduction is 2 seconds. We may argue from short time to wide range, but at most in 80 per cent. of the cases from wide range to short time. If we combine range and time into a single formula (Ranschburg), and speak henceforth simply of memory, we find that memory improves as the classes advance. Boys improve with age, both in span of memory and in time of reproduction; girls show a falling off, in both respects, in the years ten to eleven. Memory shows a complete parallelism with general school progress; is on the whole better in girls than in boys; and is better in children of comfortable circumstances than in the poor. The best criterion of memory, in the present meaning of the word, is the time of reproduction. The number of perseverations is proportional to the difficulty of the task. Many other matters of interest (the paper fills 110 pages) must here be passed over.] Literaturbericht. **O. Kraus.** 'Berichtigung.' **J. Friedrich.** 'Zu vorstehender Berichtigung.' [*Apropos* of a review of *Das Recht zu strafen.*]

IX.—NOTES AND CORRESPONDENCE.

In my notice of Prof. Billia's book, *L'Esiglio di Sant' Agostino*, in the July Number of Mind, I attributed to him views similar to those of Rosmini on the relation of Church and State, and made use of the terms a 'Universal Church,' a 'Church of the State, but with less priestcraft and ceremonial, and greater liberty both of thought and of action'. Prof. Billia writes that he is, and has always been, opposed to such a conception as a State Church, and to any domination of the State over intellect and conscience. My words were based on his tenth chapter ("on Christian Philosophy"). They do not, however, bear the construction which he puts upon them, but were used in a quite general sense. "Church of the State" does not imply,—as it may well do, in Italian, for obvious historical reasons,—a "*Religion* of the State," with consequent raising of heresy into a crime against the State, civil disabilities of dissenters, etc. I hope, therefore, my phrase may not, as he fears, cause misunderstanding, in his own country, of Prof. Billia's views.

J. L. McIntyre.

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